DOCUMENT RESUME

ED 429 560 IR 019 469

AUTHOR	Treadwell, Mark
TITLE	1001 of the Best Internet Sites for Educators. K-College.
ISBN	ISBN-1-57517-142-2
PUB DATE	1999-00-00
NOTE	271p.
AVAILABLE FROM	SkyLight Training and Publishing, Inc., 2626 S. Clearbrook Dr., Arlington Heights, IL 60005; Tel: 800-348-4474 (Toll-Free); Web site: http://www.iriskylight.com
PUB TYPE	Books (010) -- Reference Materials - Bibliographies (131)
EDRS PRICE	EDRS Price MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Annotated Bibliographies; Computer Uses in Education; *Educational Resources; Elementary Secondary Education; Evaluation Criteria; Glossaries; Information Policy; Information Retrieval; *Resource Materials; Safety; Search Strategies; *World Wide Web
IDENTIFIERS	Technology Integration; *Web Sites

ABSTRACT

This resource, designed to help K-12 teachers find relevant information on the Internet for both themselves and their students, lists educational World Wide Web sites that have been selected based upon their content and relevance to the curriculum. Each entry includes: the URL; comments describing how the site relates to the specific area of the curriculum and how teachers might use the site in the classroom; a rating for the quality of the presentation; a rating for the quality of the content and its relevance to the curriculum; and appropriate grade levels. Subjects areas included are: foreign language; general; health and wellness; information technology; language arts; mathematics; music and performing arts; science; social studies; technology education; and visual arts. Selection criteria are listed in the introduction. The publication also includes instructions for searching the Web, hardware and software recommendations, guidelines for safety on the Internet, a sample school Internet policy and application for a school Internet license, and a glossary of Internet terms. (DLS)

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ED 429 560

1001 of the Best Internet Sites for Educators

Mark Treadwell

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1001 of the Best Internet Sites for Educators

Published by SkyLight Training and Publishing Inc.
2626 S. Clearbrook Dr., Arlington Heights, IL 60005
800-348-4474 or 847-290-6600
Fax 847-290-6609
info@iriskylight.com
http://www.iriskylight.com

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Project Coordinator: Amy Kinsman
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Cover Designer: David Stockman
Production Supervisor: Bob Crump
Proofreader: Jill Oldham

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Printed in the United States of America.

ISBN 1-57517-142-2

2362-PG
Item Number 1704
Z Y X W V U T S R Q P O N M L K J I H G F E D C B A
06 05 04 03 02 01 00 99 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

Introduction

How to Use this Resource

1001 of the Best Internet Sites for Educators has been developed to help teachers find relevant information on the Internet for both themselves and their students. This text is supported by the teachers@work directory at the following web sites:

http://www.teachers-work.com

and

http://teachers.work.co.nz

Each site listed has been selected based on its content and relevance to the curriculum. The comment that accompanies each listing describes in brief how the site relates to the specific area of the curriculum and how teachers might use the site in the classroom.

Two specific ratings appear. The first reflects the quality of the content and its relevance to the curriculum. The second focuses on the quality of presentation. Both content and presentation ratings are out of a possible 5 points. A combined score of 8 out of 10 for content and presentation was necessary for inclusion in the teachers@work directory and this text. The higher the score, the more relevant the information and the better it is presented. Scores of 5+ are reserved for top ten sites in each category.

The site must meet additional criteria before receiving this final, simplified rating. These criteria follow:

- **The site is authorized and has credibility**. A credible site has an organization or educational basis behind its content. These often appear in the form of a link to the organization or to a biographical page detailing the author's (or authors') background and contact details.
- **Information is cited properly**. References to the original source of the information and how to find it accompany quoted statistics and other data.
- **The site is interactive.** The site allows for a response through either forms or e-mail. The site responds to requests and acknowledges information sent.
- **The site has an emphasis on information** not on flashy applets that have no use or obvious application. Graphic files download quickly and do not take up the whole screen.
- **The site is updated regularly where necessary**. In most cases, information on the Net should be updated regularly, which means at least once a month. Check the site for the last update date. Some sites, however, have information that is well presented and will not date.

Many math sites, for example, do not require updating as such and may be very valuable even though they have not been updated for two years.

- **The site has links to additional information**. One site can rarely do justice to a particular topic. Good sites always refer visitors to additional sites for more information.
- **The site can be navigated easily.** It should be obvious what to click on and how to return to where you started. Indexes on the left side of the page, or frames, are a good tool, although frames can sometimes be more of a nuisance than a blessing.
- **The site is searchable** if it is large, and it has an index to the site's content. Searches of directories need to be theme-based not Boolean-based as in a search engine.
- **The objective of the site is obvious** and stated in the introduction. Content should reflect this objective. Often the objective is not realized through the content.
- **The site has a correlation with the curriculum**. The material should relate to curriculum objectives and your country's educational objectives.
- **The site has no racial/religious/gender imbalance** or offensive language. Before recommending a site, take into account the ethics and morals that you wish to establish within your educational community. Be aware of the hidden curriculum that you may end up teaching unknowingly through the sites you recommend.
- **The level of language at the site is appropriate,** and the font size suits the needs of intended readers. This also applies to the interplay between text and graphic/video/audio files. If these are misplaced or displaced from the linked text, for example, the relationship is not obvious and they become merely a distraction.
- **The layout is simple.** Simplicity is one of the best guides to quality of content.
- **The tasks allow for various learning styles**. Each site may focus on one style, but a balance of styles is the overall aim.
- **The types of activities vary** and include independent, teacher-dependent, and peer- or team-dependent activities.
- **Sites encourage students to be creative,** use their imagination, and employ problem-solving strategies to understand the material presented.
- **Project-based sites provide a project management process** for teachers and students to follow, including developmental objectives, time lines and time frames, and development strategies.
- **The content encourages alternative points of view** when making ethical and moral statements, and students have the opportunity to investigate these other points of view through referenced links or additional resources.
- **The questioning strategy includes higher order thinking skills,** including synthesis and evaluation of information and application and analysis of data, points of view, or information.
- **The opportunity exists to share what students have learned** with their peers through electronic lists or news groups.
- **The site provides a means for students to process the information into knowledge** through sound questioning techniques, use of visual and audio support, and investigative inquiries.

- **The site clearly states the level of ability** it aims at and what subject areas it covers.
- **The site provides links to plug-in applications,** such as Shockwave or RealAudio, where required.
- **All lists or news groups are moderated.** If the site accepts responses, the site coordinator reviews them before placing them on the site.
- **The information on the site is independent of commercial gain;** i.e. the site owner receives no pecuniary advantage through the comments, views, or opinions expressed at the site.

If a site does not appear that you think should, please send e-mail to teachers@work.co.nz; if it makes the grade it will appear in the teachers@work directory. If you are covering a particular topic and wish for more sites on that topic, send a brief e-mail message requesting additional material.

Searching the Web

Semantic Fields

A semantic field is a set of terms that provide a lead to sites on a particular topic. To help students develop a good semantic field, hold a brainstorming session and have students suggest useful terms. Students are not intrinsically good at thinking of associated terms, so do not be too surprised by some of the terms they think are appropriate!

For example, a semantic field for sites suitable for school children dealing with the planet Mars might include such terms as

planet Mars astronomy NASA "solar system" K–12 Martian

Students might suggest such words as *space*, but *space* is not a good term as it has multiple meanings (taking up space, watch this space, etc.).

Brainstorming semantic fields provides students with a comfort zone in which to practice. Developing a semantic field often requires prior knowledge students do not have, so it is unfair to expect them to search for information successfully without a brainstorming session first. For example, say students seek answers to the following question:

"Compare and contrast the retirement plans of the United States, Australia, New Zealand, and the United Kingdom."

The semantic field for this topic is quite difficult because in the United States, these plans are known as retirement plans, in the United Kingdom they are known as pension plans, and in Australia and New Zealand, they are called superannuation schemes. Therefore, if students use the term *retirement* in their search, they will not get information on the UK, Australian, and New Zealand systems. A good semantic field would include the following terms:

retirement pension plan "financial planning" superannuation

Once students have a semantic field, they must decide which terms to type into the search field and enter into the search engine. This step also requires a brainstorming session with students until they have the experiences to make this judgment.

Boolean Searching

Boolean searching refers to the combining of symbols and terms to refine a search and provide the best results. The most useful terms are AND (or +), NOT (or -), OR, and NEAR. Most search engines accept the addition (+) or subtraction (-) signs in lieu of the words AND and NOT, and as they are quicker to type, it's a good idea to get in the habit of using them.

AND (+) and NOT (–)

The two principal operators used to get more specific results from a search are AND (+) and NOT (–). For example, a student seeking information on Malaysian festivals who simply types *Malaysian* and *festival* into the search engine will get a list of sites dealing with festivals from any number of countries and all sites associated with Malaysia. What the student really wants is sites with both Malaysia AND festivals. So the student might enter

+Malaysia +festivals

Entering this search produces a list of many sites, including those dealing with Malaysian sports festivals, which is not what the student needs. To remove all the sports-oriented sites, the student next enters

+Malaysia +festival -sport

Capitals

If the student enters *Festivals*, he or she will get only sites that use the word Festivals beginning with a capital letter. Entering lower-case *festivals* produces sites that use both the words festivals and Festivals.

OR and NEAR

The OR term can be very useful. For example, when looking up information on cats and dogs, a student who enters

+cats +dogs

gets only sites with both these terms. If the student enters

cats OR dogs

he or she gets sites that have either cats or dogs featured as well as the ones that have both. Not all search engines use these two operators; check the search instructions at each search engine's home page to see whether it accepts these terms.

Those search engines that use the operator NEAR allow you to find additional sites that might not be included in a specific search. Because NEAR produces sites with similar terms, it is helpful when you are performing obscure searches and are unsure of the best terms to use.

Quotation Marks

The use of quotation, or speech, marks is very helpful in situations where you know terms are used in sequential order. An example is

"British Columbia"

This search returns only sites that use the two terms in this order. This is very useful when looking for organizations such as

"World Health Organization" or "American Council for Research in Education"

Another useful search tool is the asterisk (*), especially if you are not sure of the spelling of the topic. Typing *architekt**, for example, yields sites with the correct spelling but also those with similar words such as *architecture* and *architectural*. As different countries use alternative spellings, this tool is very helpful.

You can use Boolean operators in any combination and with as many terms as you desire, but, generally, use no more than four terms. The most critical aspect of a successful search is to choose key words, which takes a lot of practice.

Search Engines and Directories

Several tools are available to search for information on the Internet. The most common are search engines and directories. A search engine allows you to enter a term, then it searches web sites for that term. A directory is a list of sites; when you search a directory, you often search only reviews of those web sites, not the sites themselves.

Because a directory searches site reviews, a directory is not the place to look for specific information. A directory tries to match your request with what the directory has available. Most directories add material regularly, but you are still searching a reduced set of the Internet. Directories usually have conditions under which sites are added; for example, a directory may hold only children's sites (such as Yahooligans) or garden sites or quality education sites (such as teachers@work). Directories are helpful because the sites listed have been found useful for a particular area of interest. Often directories rate the sites to guide users as to age suitability, quality of information, or presentation. Directory reviews range from key words to full page reviews complete with ratings and applications.

A search engine adds sites constantly by using software that scans the Net or from postings to the engine from web-site authors. Search engines then sift through the key words site authors provide to see how well they measure up against data from each of the more than 7 million sites they have access to. The remarkable aspect is the speed at which search engines operate! The problem with search engines is that vague searches using poor semantic and search fields will return thousands of sites, most having little relevance to the user's need. But searches using good semantic and search fields with good use of Boolean operators can be remarkably accurate.

Popular Directories and Search Engines

Below are some popular directories and search engines and their capabilities and limitations.

Yahoo (http://www.yahoo.com/): Yahoo categorizes information according to themes, so if the information you seek is thematic such as *whales* or *mammals*, Yahoo is a good engine to choose. It presents sites in a family tree style, graduating from very general topics to more and more specific topics. Yahoo is assembled by humans; therefore, it shows some human intuition, which makes it a more logical search engine. This is the most used engine at present, closely followed by HotBot.

Excite (http://www.excite.com): Excite tends to specialize in academic/scientific sites but is a general purpose engine as well. A concept-based engine, it is not word-specific so it uses the symbols "+" and "-" as well as other Boolean operators. You must place these symbols directly in front of the key word of your search. For example, if you want to holiday in Greece and you want to play tennis there, you might enter

+tennis Greece holiday

This search phrase provides a list of holiday destinations that provide tennis as an option, but they may not all be in Greece, and some may be places where they serve Greek food or hold Greek festivals. If you are definite about tennis in Greece, you enter

+tennis +Greece holiday

If you want to avoid beaches, you enter

+tennis +Greece holiday -beach

Use of the Boolean operators overrides the concept searching that Excite carries out normally, and Boolean search rules apply.

AltaVista (http://www.altavista.com/): This engine claims to search the largest database of URLs and web page introductions, which can be a blessing in some instances and a curse in others. AltaVista is quite good for beginners as it interprets naturally written questions such as "What is the weather in Los Angeles today?" but be prepared for some odd returns. This search engine is good for obscure searches.

AltaVista uses the "+" and "-" operators, so be aware of the rules that go with using these. Alta Vista also has the additional operator "*" which broadens a search such as *car* to include *cartoon, carriage, carrot,* and so on.

Dogpile (http://www.dogpile.com/): Dogpile is an example of a meta-search engine. A meta-search engine searches several search engines to get results. Dogpile is a super meta-search engine because it searches the top 16 search engines and top three news wire services. The search engine uses Boolean operators, and if you put none in, it assumes you mean AND. You must use capitals for the operators. Meta-search engines are great for students who have a good handle on Boolean operators and have a very specific request such as "Magellan's second voyage" or "the atmospheric pressure on Jupiter."

Ask Jeeves for Kids (http://www.ajkids.com/): Ask Jeeves is a natural language search engine. You can ask questions such as "Do all animals have a heart?" and it clarifies your request by asking additional questions, then provides a list of sites that help answer your question. You need to be a bit careful with these engines as they can often misinterpret your question and make suggestions that are inappropriate for the classroom.

HotBot (http://www.hotbot.com/): One of the largest search engines, HotBot has some very clever software to filter the responses to your requests. For this reason, HotBot is very good at specific searches such as "world coffee price changes 1999." If the topic is broad, you get a lot of responses, but this engine shines more and more as the topic becomes narrower. HotBot also provides choices so you may not have to use Boolean operators and still get good results.

Yahooligans (http://www.yahooligans.com/): This subdirectory of Yahoo lists sites suitable to those aged 15 years and younger. The site is great for students and teachers searching for general themes. Do not use it for specific searches; it was not designed for this approach.

Excite (science/math)	http://www.excite.com/	**HotBot** (specific)	http://www.hotbot.com/
AltaVista (general)	http://www.altavista.com/	**Yahooligans** (k-12 sites only)	http://www.yahooligans.com/
Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

Additional Search Aids

For a complete guide to searching the Internet, look on the Internet. Scott Nicholson has put together an excellent introduction to Internet searches. His tutorial introduces the various search tools and explains how they work and which ones suit which task. He is a very amenable person, and if you ask permission, he may let you use his material in your class as an introduction to searching the Internet. It comes complete with a test at the end. He also offers another service called Great Scott. At this service, you provide information about what you are searching for, and Great Scott helps you select the most appropriate search engine to meet your needs. Find Scott at http://www.askscott.com/.

Now Where Was I?

Often we find information then forget how we got there. It is good idea to save really good sites in your bookmark system, but when you forget, one way to locate the site using Netscape Navigator is to type the following into the location bar:

about:global

This produces a list of all the sites you have visited for the last three months or so depending on the size of your history, or cache, file. Deleting the cache in the normal way does not delete this file completely, so this tool is also a good way to check up on what students have been up to while you were not looking! If you use Microsoft Internet Explorer as your browser, select History from the Explorer toolbar or from within the View menu.

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Computer Requirements

To gain maximum benefit from the sites mentioned in *1001 of the Best Internet Sites for Educators,* it is necessary to use either Netscape 4.0 (or later) or Microsoft Internet Explorer 4 (or later). Both browsers allow access to Java-enhanced sites. Java allows animations and greater interactivity, and some sites incorporate these functions into their sites. If you are using a different browser, make sure it is capable of handling Java-based sites. If your browser cannot read Java, you will be able to view only parts of the site.

In addition, the following specifications are suggested. You can view most sites without these features, but they allow you to get the most from the site. All the recommended software is free; the web sites from which you can download them are listed.

Feature	Comments	Web Access Site
Sound card and speaker(s)	Many sites now have MIDI files, audio files, and music associated with them. Most sites still work without this function.	N/A
28.8Kbps modem	This is the minimum recommended modem speed, but sites will eventually download on slower modems.	N/A
RealAudio/ RealVideo	RealAudio/RealVideo is becoming a standard for accessing sound files and short video clips over the Internet. Download the software from the web site in the next column.	http://www.real.com
Macromedia Flash and Shockwave	Both these plug-ins improve the look of graphics and provide animation effects. They are becoming increasingly common.	http://www.macromedia.com/
QuickTime	This is a common plug-in for watching short movie clips.	http://www.apple.com/quicktime/
Crescendo	Many music education sites use this music-enabling plug-in, making it a recommended download.	http://www.liveupdate.com/crescendo.html
Adobe Acrobat Reader	This free plug-in allows you to view large text-based files without losing formatting. An excellent tool, it is commonly used to supply units of work and reports to educators.	http://www.adobe.com/prodindex/acrobat/readstep.html
NetZIP	This mode of downloading plug-ins and files from the Internet compresses them so they take up less space on your hard drive. Useful for those with smaller hard drives.	http://www.netzip.com/plugin.html

Safety on the Internet

Safety on the Internet is a paramount consideration. The Internet has much information that is valuable for children to access, but questionable material and some that is objectionable to any community also exists. To ensure that children do not access such material, follow these guidelines:

- Always ensure the computer with Internet access is placed in an open and public environment whether in the classroom or the home. Do not place computers behind screens or in rooms away from the class or family.

- Use filtering software. This software makes sure that sites containing objectionable material are not available to children. The most common filtering software titles are "Cyber Patrol," "Surf Watch," and "Net Nanny." Their cost is usually about $40 to $50, and they are available in most stores that sell software.

- A school that allows students to access the Internet should have a policy in place to control its use. The policy should cover the main features of the Internet and its use by students, staff, and visitors. A sample general policy appears under Internet Policy Document for Jefferson School. A verbal policy may be more appropriate in the home.

- Some schools may wish to have a licensing policy where parents/caregivers sign a card giving their consent for their child to use the Internet. This card is laminated, and students using an Internet-enabled computer must place this license on the computer. If students abuse the school's Internet policy, the license is confiscated and turned over to the student-run Internet Committee, which determines the appropriate disciplinary action. When students complete the disciplinary action assigned, they get their license back. Serious offenses are dealt with by the teacher in charge.

Internet Policy Document for Jefferson School

Use of the Internet at Jefferson School is a privilege not a right.

The Internet is available to staff, students, and community members under the following conditions.

Staff

All staff, whether part-time, full-time, teaching staff, or non-teaching staff, are allowed access to the Internet in accordance with the following provisions.

All Internet use shall be for the purpose of

1. Providing information for students or teachers of students such that they may have a better understanding of subject matter.
2. Enhancing skills of staff through research and procurement of information via the Internet.
3. Using e-mail for contact with other teaching staff on school business or to request information to benefit the school.
4. Using the Internet phone system through accounts set up and paid for by individual departments and controlled by department heads. This phone system shall be used only for educational purposes.

Use of the Internet shall be permitted once staff have taken a course in its use and received a license to use the Internet. The license ensures that all staff are competent to use such a service. Courses shall be run at regular intervals so all staff can acquire such skills.

Use of the Internet for personal use is not permitted other than for exchange of e-mail. Use of the World Wide Web and Internet phone and fax services shall be for school purposes only.

Students

Students shall have access to the Internet under the following conditions:

An application to use the Internet shall be sent home and returned signed by the relevant caregivers. The policy statement and a code of conduct will form the basis of the documentation the caregiver and students agree to.

This application enables the student to receive instruction in the use of the Internet, including e-mail and World Wide Web access.

Upon finishing the appropriate course, the student must pass a proficiency test. The student will then be issued a license that must be signed by the caregiver and the student and then laminated. To use the Internet, the student must display this license at the computer terminal during use.

All students must adhere to the following code of conduct when using the Internet at school:

Guideline 1: General Statement

- The Internet is provided for the education and the improved delivery of curriculum material. Students are encouraged to make use of the services to this end.

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Guideline 2: E-mail

- E-mail is provided for students to contact other students in the interest of education.
- All e-mail material is written offline.
- All mail makes use of customary greetings and salutations.
- E-mail boxes will be checked at least once every three days, and all incoming mail will be appropriately filed or deleted.
- Information sent via e-mail shall be constructive, informative, or inquiring in the interest of both the sender and receiver.
- Spelling and grammar will be checked and approved by monitors or staff before any messages are sent.

Guideline 3: Use of Service

- No profanity, obscenities, or any other language that could be construed as such shall be used in any e-mail messages.
- No private information is to be distributed to other parties at any time. This includes reposting of information sent by another party.
- The network is not to be used by any student for personal gain or illegal activity.
- Deliberate attempts to gain access to WWW, FTP, Gopher, or Telnet sites containing material of pornographic, racially or religiously offensive, illegal, or offensive nature will be dealt with as a serious breach of school rules.
- Material downloaded must be scanned for viruses at all times, and any deliberate attempt to spread viruses through the network will be dealt with by the management of the school.
- All copyright, privacy, and international laws are to be abided by at all times.

Guideline 4: Accounts

- At no time are students to place orders for goods or services over the Internet using the school name, title, or funds.
- E-mail accounts are set up for the intended user only. Use of other students' accounts to send and receive e-mail is unacceptable.

Guideline 5: Liability

- Jefferson School is not, and cannot be held, responsible for the loss of material, accidental corruption, or any other action that might affect transmission or loss of data.
- Jefferson School has taken all possible precautions to maintain safety of all users, and these guidelines are written and enforced in the interest of all users' safety and effective use of the Internet.

Students who abuse any of the guidelines will be dealt with by the student-run Internet Committee. The committee will comprise five students elected by their peers to maintain the guidelines. The committee will draw up a series of punishments for those students who abuse the above guidelines. These punishments will revolve around suspension of the student's license for varying amounts of time, or the committee may assign productive tasks that benefit other Internet users.

Serious offenses will be referred to the Computer Site Manager, who will deal with the offenses as directed by the school discipline policy.

Members of the Public

The Internet may be used by members of the public in controlled situations with a staff member or other member of the public elected to run such an event. Members of the public are expected to conform to the same guidelines as expressed above, although a formal signing of an agreement is not necessary.

At all times, the person selected to be in charge shall do all in his or her power to ensure that these guidelines are adhered to. Such community-use sessions shall be run such that Jefferson School receives an income from such events to offset costs.

Jefferson School

Application for an Internet License

Name of Applicant ________________________________

Address ________________________________

Parent/Caregiver name(s) ________________________________

Contact phone number ________________________________

Year level ________________________________

Time at Jefferson School (years) ________________________________

Class and teacher's name ________________________________

I have read the Jefferson School Internet Policy statement and agree to abide by the rules as laid out in this document. I agree to abide by the decisions made by the School Internet Committee and by the teacher in charge at the time I am using the computer.

Student signature ________________ Date ________ Student ID # ________

Parent/Guardian/Caregiver

As the parent/guardian/caregiver of the student above, I have read the policy statement relating to the use of the Internet in the school, and I understand that the intention of the use of the Internet within the school is for educational purposes. I understand that Jefferson School has taken all possible precautions to make the Internet as safe as possible for all users. I also agree to support the school in any action it may take to ensure that the code of conduct as described in the policy statement is enforced.

Name ________________ Signature ________________ Date ________

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Foreign Languages

URL	Comments	presentation	content	grade level
http://clicnet.swarthmore.edu/	**ClicNet.** Whether you teach formal or conversational French, you'll find this site very useful. Completely in French, it provides lots of information in a student's context. Check out French culture, history, cinema, art and design, education, and the economy among many other areas. Easy to find your way around.	4	5	4–12
http://babel.uoregon.edu/yamada/guides.html	**Yamada: Language Guides.** If you need additional computer fonts for the languages you or your students are studying, this site can provide them (112 fonts in 40 languages). This site also has an extensive collection of language guides (115 in all) that provide excellent conversational and grammatical introductions.	4	5+	all
http://www.ucm.es/OTROS/Periodico/	**España hoy: Noticias.** "Este es un periódico con información extraida de la prensa española, realizado por estudiantes de la Facultad de CC. . . De al Universidad Complutense de Madrid." Yes, this is the weekly news in Spanish. The site is great for teaching Spanish to students using actual news reports. The pictures help!	4	5	7–12
http://www.jump-gate.com/languages/french/	**French Language Course.** This excellent introduction to the French language covers pronunciation, the usual grammar material, and some good context settings such as The Family, Where do you come from?, Time, and so on, which could be great homework tutors or support/extension materials.	4	5	all
http://lanic.utexas.edu/	**The Latin American Network Information Center.** This site provides a huge range of Spanish-language materials in cultural, civil, and geographic areas. There is a great deal here, so put aside an hour or two and look for information useful to your language program.	4	5+	all
http://darkwing.uoregon.edu/~osshejlp/	**OUS Japanese Language Project.** In this huge database of information from Oregon University Systems, choose a topic, a function, a level, and a speaking, listening, or writing exercise, and get from 5 to 10 student exercises. Good material.	4	5	all
http://castle.uvic.ca/german/149/	**German for Beginners.** This is a great site for teaching conversational German. Well-presented lessons, dictionaries, and exercises.	4	5	all
http://www.francophonie.org/main.htm	**L'Agence de la Francophonie.** This site, in French, provides news and information on France and makes for an excellent learning experience for students who have a good basic understanding of French. It offers links to many other French sites.	5	5	8–12
http://webjapanese.com/	**Web Japanese.** This is a site of variety with no single theme, so read the guide. The site contains such material as a Java-based Hirigana game, an interactive quiz on commonly confused phrases, an excellent photo dictionary, and much more. Great beginners site.	4	5	all

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http://www.japanese-online.com/	**Japanese Online: Free Japanese Language and Math Learning.** Great site. The numerous lessons in such areas as dialogue, vocabulary, grammar, and culture are well presented. Many come with their own sound files. Check out the bulletin board where students can exchange messages in their halting new language.	4	5+	all
http://www.ocrat.com	This site, **Chinese**-related web applications with a focus on Chinese-language learning for English speakers, is excellent for anyone teaching Chinese at any level. With some great animation, Chinese characters are created one stroke at a time. You can listen to Voice of America in Chinese! It includes character pronunciations.	4	5+	all
http://www.pacificnet.net/~sperling/eslcafe.html	**Dave's ESL Café. Where Learning English is Fun!** This site contains plenty of links, good ideas, the Graffiti Wall, the Discussion Center, the Phrasal Verb Page, some good quotes, and much more.	5	4	all
http://www.bgs.qld.edu.au/edlinks/languages/Japanese/activities.htm	**BGS World Wide Web LOTE Activities: Japanese.** This site from Brisbane Grammar School consists of 12 exercises in Japanese in such contexts as "Compare the 'top ten' of two famous Japanese radio stations" or "Determining the information about a part time job." More appropriate contexts for senior students.	4	4	9–12
http://www.inform.umd.edu/EdRes/Topic/Humanities/.C-tut/C-tut.html	**Chinese Multimedia Tutorial.** This is a great place to start learning Chinese for fun. It has a simple greeting you can listen to as well as an introduction to Chinese characters.	4	5	all
http://www.june29.com/HLP/	**The languages and literature of almost every cultural group you could imagine.** From Basque, Catalan, and Guarani to Icelandic, Mohawk, and Myanmar. This very comprehensive set of links is well organized and very thorough. Information deals with multilingual resources, linguistics research, and commercial resources.	5	5+	all
http://www.cs.brown.edu/fun/welsh/Welsh_main.html	**A Welsh Course.** Designed for beginners, this site would be an ideal language focus for a month and would provide some conversational prowess if not a complete fluency. The course starts with a section on pronunciation and goes through construction and simple sentences. Great material.	4	5	all
http://www.travlang.com/languages/	**Foreign Languages for Travelers.** This is a great resource for grades K-8, and if students review a couple languages a year, they get exposure to 20 languages before they reach grade 9! The material here is reasonably basic. More than 60 languages available.	4	4	all
http://instruct1.cit.cornell.edu/~agl1/grenouille/	**Le Coin Des Francophones et autres Grenouilles.** This site from the University of Cornell is an excellent resource for teachers of French. Topics include sports, arts, literature, politics, and education. Excellent site.	4	5	all
http://www.cltr.uq.oz.au:8000/~rogerg/langnet.html	**Internet Tools in Language Teaching.** A must-visit site for all language teachers. It has an excellent introduction to the Internet then moves on to how these tools can be used fully in the language classroom. The Internet is a versatile tool for language teachers, and all language teachers and their students should have access. Mail, news groups, IRC, MUDs, MOOs, audio and video conferencing, FTP, web, and gopher are all discussed and supplemented with excellent applications.	4	5+	all

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

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http://www.eat.com/learn-italian/index.html	**Learn to Speak Italian with Professore Antonio!** This excellent site will appeal to students at all levels. It offers a series of conversational lessons on such topics as A Happy Family with subcategories such as what to say to your husband and what to say to the kids. More conversation on travel, food, and romance and a 12th century Italian folk tale. A great site with attitude. Hai gia fatto il tuo compito per casa? (Have you done your homework yet?)	5	5+	all
http://www.mhpcc.edu/~erobello/homepage_ernie/ernie1.html	**Ernie's Learn to Speak a Little Hawaiian.** Kökua mai. At this great site you can learn a romantic language and impress everyone. This delightful introduction to the Hawaiian language provides some basic sounds, introduces the importance of the macron, then covers some pronunciation work and some typical social phrases. From here you can learn some questions and answers and even some more colorful expressions and everyday terms.	4	5	all
http://www.cnd.org:8024/CND-Tech/HXWZhelp.html	**Reading Chinese on your PC or Mac.** Your web browser cannot read many of the Chinese online magazines and sites unless you make some changes. These are outlined at this site. All are either free or very inexpensive.	4	4	all
http://www.virsoft.com/duden_i.htm	**Diccionario, the only solution. Spanish/English/Spanish.** This freeware for educators is a dictionary for translating into either English or Spanish. The dictionary (an understatement really), with 72,000 terms and 200,000 endings, is quite fast and quite accurate. Very useful tool in the language laboratory or for checking compositions.	4	5+	all
http://www.bucknell.edu/~rbeard/diction2.html	**A Web of On-line Dictionaries.** This massive collection of dictionaries includes every language you could ever imagine such as a Comparative Bantu On-Line Dictionary Data File, basic Albanian Vocabulary, Esperanto, and even Klingon and Romulan ("Star Trek"). The site is a treasure trove of material on the huge range of languages spoken throughout the world and is a language teacher's Aladdin's cave.	4	5+	all
http://www.virtualbangladesh.com/bd_bhasha.html	**Survival Bengali.** This site would be a good aside to a study on Bangladesh or the Indian subcontinent. The material is excellent and quite comprehensive.	4	5	all
http://www.geocities.com/paris/LeftBank/3852/cooplearn.html	**Cooperative Learning in the French (and some German) Class.** This excellent site from Pickering, Ontario, provides some excellent cooperative learning strategies for the teaching of French. These are also suitable for all languages. The exercises include cooperative jigsaws, reading, comprehension, imaginary friends, and sight passages. Excellent ideas and a fun environment in which to learn. Suitable for all ages.	4	5	all
http://members.aol.com/joyo96/index.html	**Understanding Written Japanese.** This site has an excellent collection of support material for teachers looking for work on Kanji, Hiragana, or Katakana.	4	5	all
http://www.u-net.com/eflweb/	**English as a Foreign Language magazine.** *EFLWEB* is a great magazine for teachers of both English and EFL. The amount of information is huge. Events and conferences are listed as are other web sites, a virtual bookshop, reviews of products for the classroom, a notice board for sales and exchanges, and software. You can even post your resume for the world to see how wonderful you are. This is all on top of a great range of articles written for and by EFL teachers. Top 10 site.	5+	5+	all

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http://www.utm.edu/departments/french/french.html?	**TennesseeBob's Famous French Links.** This site is included due its expansive nature. The site includes French gopher sites as well as web pages, and the contents are organized into an index, which makes finding the information you want much easier.	4	4	all
http://www.antara.co.id/	**Antara: The Indonesian National News Agency.** This great site is available in both Indonesian and English. Use the site to provide your students with background on cultural, political, and economic issues within Indonesia as well as to learn what Indonesians think is important in the world.	5	5	all
http://www.richmond.edu/~jpaulsen/gvfrench.html?	**Le Quartier Francais du Village Planetaire.** "Avec Internet cette fameuse conscience planétaire, tant prônée par des précurseurs comme Teilhard de Chardin, devient palpable. Dans le cybermonde, la notion d'étranger n'existe pas." This great site covers all aspects of French language and culture. The site has been operational for four years and is regularly updated. Excellent resource.	5	5	4–12
http://www.utas.edu.au/docs/humsoc/modern_languages/french/welcome.htm?	**The French Studies Website of the University of Tasmania.** This site also contains links as well as some quite good in-house resources. The links have been screened and only the best included. Several resources stand out: the 75 reasons one should study French and several other articles along this line. The site also has information regarding careers that require an understanding of the French language.	4	5	8–12
http://www.lemonde.fr/	***Le Monde.*** What better context for teaching French than to use this internationally renowned newspaper? Newspapers are an excellent tool in language classes because they contain visual clues to the context, and the articles are often short, to the point, and well written. An education section and a new technologies section are excellent reading.	5	5	all
http://www.japan-guide.com/	**Guide to Japan.** This collection of more than 200 pages of information on Japan and its culture has some excellent sections such as Living in Japan as well as language, history, food, politics, current news, and tradition. In English, the site offers a Japanese pen friend service and live chat and discussion sessions. The photo gallery section is an excellent source of prompting material with topics such as culture, earthquakes, and cities.	4	5	all
http://www.asahi.com/english/english.html	***Asahi Shimbun.*** For students of Japanese, this news page is excellent as it appears in both English and Japanese and provides a good opportunity for students to practice and extend their Japanese language skills using a contemporary Japanese context.	4	5	all
http://www.piacere.com/	***The Magazine of La Cucina Italiana.*** This excellent online magazine focuses on the cuisine of Italy. At some stage in learning Italian, food is a topic as it is very much part of the culture of the country. Here you can find recipes for authentic Italian dishes with great background notes.	5	4	all
http://www.city.net/countries/germany/	**The Excite Guide to Germany.** This excellent set of links and information deals with all parts of Germany. An excellent introduction to the new Germany pulls no punches. The site has links to sites on every main city, region, and state in Germany as well as communities. Often both English and German language sites are available.	5	4	4–12

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http://www.radio-directory.com/stationsintl.html	**International Radio Directory.** This is a very comprehensive list of radio stations around the world, most of which are available via Vivo or RealAudio over the web. Research shows that language immersion techniques are very successful, and immersing students through a French, German, or Swedish language radio station supports the learning of the culture, too. It puts language in a strong context and allows students to develop a broader vocabulary range, and they love listening to it.	4	5+	all
http://www.lmp.ucla.edu/	**The UCLA: Language Materials Project.** This collection of resources, language profiles, and learning centers focuses on less commonly taught languages. For Afghani through Zulu, a search engine locates dictionaries, grammar reference material, readers, and phrasebooks. Excellent resource.	4	5+	all
http://www.learndutch.org/	**Learn Dutch.** This site is a great resource for teachers of the Dutch language. The site has a sizeable collection of information on Dutch culture and links to additional sites to immerse the class in the language and culture.	4	5	8–12
http://jltc.army.mil/JLTC/spanish/spanish.news.html	**Spanish Newspapers Page.** If you are looking for information on Spain or some great material for students to read that is more contemporary than their texts, newspapers are an excellent resource. Because Spanish is spoken in many countries, this is also an exercise in geography as the site has papers from Panama, Guatemala, Peru, Costa Rica, and many more in addition to those from Spain.	4	4	all
http://sun3.lib.uci.edu/~slca/newspapers/int_new1/france.htm	**International Newspapers Online: France.** This is a great selection of French newspapers from the various regions of France. Newspapers provide a very strong and authentic context in which to work, and this site allows teachers to integrate contemporary French culture with language studies.	4	4	all
http://www.agoralang.com/	**Agora Language Marketplace.** Finding good-quality and relevant language teaching materials can be very frustrating. This site provides teachers with a marketplace of resources of every genre from language schools and language labs to texts, web sites, and conferences. Have the monthly newsletter delivered via e-mail, and keep up with what is available.	4	4	all
http://babelfish.altavista.digital.com/	**AltaVista Systran Translation Service.** OK, it is not perfect, but what a great free service. Type in the text you want translated, and with just a press of a button, have it translated into French, Italian, Spanish, Portuguese, German, or English with more languages promised in the future.	5	5+	all
http://www.languageconnect.com/	**Language Connect.** This site specializes in resources for language teachers with an emphasis on software. In many instances, the software can be downloaded from the Internet, and the range of languages is quite broad. College level courses are available for more senior students or for your own professional development.	4	5	all
http://www.SiSpain.org/	**Si Spain.** This is a massive site with more than 3.5 million visitors. Sections cover Spanish fiestas, language and culture, foreign affairs, the economy and trade, geography, population, society, and much more. Plenty of background information is here to assist teachers. You can view the site in English, French, German, or Spanish.	4	5+	all
http://www.ild.com/	**International Language Development.** This collection of shareware software allows you to hear introductory tutorials in a variety of languages. These are ideal for providing a cultural experience of language to go along with studies of French, German, Japanese, Korean, Russian, and Spanish. Site requres a one-time fee of $9 and RealAudio.	4	4	all

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General

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http://ole.net/ole	***OnlineEducator.*** This is the premiere online site for educators with its articles on online tips and ideas for use in the classroom. Visit this site every month. While the online version of this journal is full of excellent material, the journal is also worth getting.	5+	5+	all
http://www.press.co.nz/nie/	**Newspapers in Education.** This site on a range of subjects is very well presented. Visit this page regularly. Top 10 site.	5+	5+	all
http://www.ou.edu/oupd/inetmenu.htm	**Safety on the Internet.** Probably the best set of notes available on this topic. Issue them to all students before they start using the Internet, and refer to them regularly. They should also be part of your Internet Policy Statement. All teachers should visit this site.	5+	5+	all
http://www.igc.apc.org/iearn/	**I*Earn.** Global student projects that "can make a meaningful contribution." This is an excellent example of the potential of the Internet as a vehicle for social change. Students are encouraged to work with students around the world to tackle social issues. To be part of an I*Earn project, you must register as a school and post an application to join a learning circle.	5	5+	all
http://ericir.syr.edu/index.html	**AskERIC.** The original and still the most comprehensive (other than teachers@work of course!) education site on the Net. The main services here are the question and answer service, the virtual library, and the Eric database.	5	5+	all
http://www.hooked.net/%7Eleroyc/kidsweb/	**Kids of the Web.** This site is an excellent collection of sites. The information is well organized into groups. This well-developed site has been around for a while and has been kept up to date.	5	5+	all
http://www.schoolnet.ca/	**Canada's SchoolNet bilingual virtual school.** This is a very comprehensive attempt by Canada to develop a complete bilingual educational site. Its excellent services include a special needs section and great ideas for Internet projects. Always worth a look.	5+	5	all
http://www.shareware.com/	**Shareware.com.** This massive site details more than 250,000 shareware titles. The software here is suitable for all platforms and ranges from small "assistants" to complete programs, development tools, drivers, and Internet browsers. The search tool is essential to locate what you want.	5	5+	all
http://www.socsci.kun.nl/ped/whp/histeduc/	**The History of Education Site.** Presented by the University Nijmegen in the Netherlands, this is an excellent review of the history of education. Schools have been a major sociologic institution throughout the world, and this site provides an excellent background on educators dating back to ancient times and, in time blocks, it works through to the present. Separate sections deal with the educational history of a good selection of countries as well as special education, online journals, conferences, archives, higher education, children's perceptions, and much more. Excellent material.	5	5+	all

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http://www.cyberkids.com/	**Cyberkids.** This is a student-oriented site, but it is still worth a look. This site is particularly strong in the arts and language. There is a section for young composers, a reading room, an art gallery, the monthly magazine, and more.	5	5	all
http://www.pbs.org/	The **Public Broadcasting Service** site offers supplemental material for its popular educational programs. Although built to support PBS' TV programs, this site can be used as a resource on its own. Great for research and keeping up with contemporary aspects of all subjects.	5	5	all
http://www.nwrel.org/sky/index.html	**Library in the Sky.** This very large site deals with all aspects of education from the curriculum to special education, counseling, teacher training, and educational magazines.	5	5	all
http://wfs.vub.ac.be/cis/festivals/	**Festivals and Traditions.** This common theme is well presented here with a comprehensive reference to festivals, both religious and secular, and the traditions they have fostered in eight European countries, China, and New Zealand.	5	5	all
http://www.kn.pacbell.com/wired/fil/	**Filamentality** demonstrates how to design and build a web site for education purposes. This excellent site guides even the most technophobic teacher through the process of developing a page that looks good and works. If you think this is straightforward, you can then check out the Son of Filamentality!	5	5	all
http://gator.naples.net/media/wsfp/lounge.htm#finding	**The Faculty Lounge.** This comprehensive teacher assistance site looks at distance learning, mailing lists, and resources on the Internet for teachers as well as how to design your own web pages. Good material here and lots of it.	5	5	all
http://www.onlineclass.com/	**Online Class.** This site delivers online, interactive, cross-curriculum material of very good quality for grades K–12. Two excellent topics available at present include Blue Ice: Focus on Antarctica and Ocean Explorers. Good material.	5	5	all
http://www.kidlink.org/	**Kidlink.** The focus here is global dialogue. The site runs a variety of projects that involve students from around the world sharing information on everything from culture to pollution. This is one of the original web sites (born in 1990), and more than 110,000 students from 122 countries have been involved.	4	5	all
http://sln.fi.edu/tfi/jump.html	**Online Exhibits Hotlist.** This is a collection of links to interactive sites with an educational angle. Excellent list of dynamic sites such as Ice Ages and Welcome to the Jungle.	4	5	all
http://205.121.65.141/Millville/Teachers/TAG/gifted.htm	**Gifted and Talented entrance.** This is a great collection of information that applies to all students. A good research base to this site is linked to articles, journals, and even some "fun stuff."	5	5+	all
http://www.ed.gov/pubs/Compact/	**A Compact for Learning: An Action Handbook for Family-School-Community Partnerships.** The complete volume is here, and it is an invaluable tool for schools and their communities. A compact is a written commitment indicating how members of the education community agree to share the responsibility for student achievement. This document offers a plan for developing a compact to assist the school in both a managerial and educational manner.	4	5+	all

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http://www2.hawaii.edu/suremath/	**21st Century Problem Solving.** This site is an excellent introduction to problem solving through the use of word problems. The approach is a logical step-by-step process and is a good introduction to the problem-solving process.	4	5	all
http://www.classroom.com/	**Classroom Connect.** This huge and very comprehensive site has a large set of links as well as clubs to join, databases, and projects.	4	5	all
http://www.ceismc.gatech.edu/BusyT/	**Busy Teachers' WebSite K–12.** This good, general site has lists of nonreferenced links to other sites. Some of the links are good, some indifferent, but this is generally one of the better sets of links.	4	5	all
http://www.teachnet.com/lesson/index.html	**Teachnet.com is one of the few good lesson plan sites on the net.** Lesson plans are well presented and well thought out and cover all areas of the curriculum.	4	5	all
http://www.education-world.com/	**Education World.** This very good general education site has a good list of sites and some added education offers.	4	5	all
http://www.abc.net.au/learn/	At the site of the **Australian Broadcasting Association** (Aunty ABC to most Australians) **gateway to education,** you can pick up transcripts and audio of many educational sessions offered by the ABC. Be prepared to put in an hour or two to work your way through this material. It is excellent and the transcripts in particular are invaluable.	4	5	all
http://www.electronic-school.com/	***Electronic School.*** This excellent journal contains great articles dealing with getting online. It builds on years of experience from a large group of schools that have gone the distance with their online technology.	4	5	all
http://www.asd.k12.ak.us/Other_Ed/Education/EdNEWSGROUPS.html	**Educational News Groups.** If you want to select some specialist education groups, this is the place to come. It lists hundreds of news groups and listservs you can join. Make sure you do not join too many, and always keep the unsubscribe message somewhere safe and accessible.	4	5	all
http://www.asd.k12.ak.us/Homepages/Jandrews/TeacherTopics.html	**Teacher Topics** is an excellent approach to meeting the needs of teachers. It lists classic topics teachers around the world use such as chocolate, space, dinosaurs, insects, and rain forests. Select a topic and get a list of links of related sites with teaching ideas.	4	5	all
http://www.bcpl.net/~sandyste/school_psych.html	**School Psychology Resources Online.** Students seem to have a plethora of new problems, and a school guidance counselor would need continuous training to be aware of these and understand their implications. This site provides counselors with information and background on such conditions as anxiety and eating disorders, attention deficit disorder, and substance abuse.	4	5+	all
http://www.marshall-es.marshall.k12.tn.us/jobe/connections.html	**Curriculum Integration: Making the Connection.** Use this excellent site to investigate e-mail and keypal projects. The site provides a comprehensive list of sites that encourage students to communicate across the globe. Projects range in age suitability from kindergarten to senior high. The site also has links to forums, Internet projects, listservs teachers and students can join, and experts who are available to answer specific questions on a variety of issues and topics.	4	5+	all
http://www.ssdesign.com/prtalkshop/art/index.html	**PR Talk Art! Library.** Some excellent graphics from the American Library Association promote using the library to connect to the world. Very trendy.	4	4	all

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http://ccwf.cc.utexas.edu/~jbharris/Virtual-Architecture/Telecollaboration/index.html	**Sample Curriculum Based K–12 Educational Telecomputing Projects.** Use this great selection of telecomputing activities from In the Kitchen: Designs for Telecollaboration and Telepresence on a class-to-class or student-to-student basis. Projects are broken down into three types: Problem Solving, Information Collection and Analysis, and Interpersonal Exchanges. About 60 projects are listed, and teachers could use one to introduce students to the Internet or as part of a language program.	4	5+	all
http://education.indiana.edu/cas/tt/tthmpg.html	**Teacher Talk.** This excellent general teacher site covers contemporary issues (which seem remarkably similar wherever you go on the planet), technology in schools, curriculum issues, parent involvement, and various forums dealing with more specific issues.	4	5	9–12
http://longwood.cs.ucf.edu:80/~MidLink/	***MidLink Magazine.*** An electronic magazine designed for kids in the middle grades, this is one of the oldest online magazines and as such has a good following and some good content. The magazine consists mostly of student contributions, and some of these are excellent.	4	5	9–12
http://www.utexas.edu/world/lecture/index.html	**World Lecture Hall.** The University of Texas has put together a series of links to sites covering a huge range of topics from Accounting to Zoology and 100 other topics in between!	4	5	9–12
http://www.infoshare.ca/csm/index.htm	***CyberSchool Magazine* Online.** This is an excellent example of a magazine for students with a good variety of curriculum, general interest, and lifestyle articles.	4	5	4–12
http://www.ipl.org/youth/	**The Internet Public Library Youth division.** The youth section of this virtual library boasts a great story hour as well as a very good newsletter. Overall, a good general site for elementary-aged children.	4	5	K–3
http://db.cochran.com/li_toc:theoPage.db	**Berit's Best Sites for Children.** There is a good collection of sites here for students in grades K-7. You can find a pen pal for the kids, read other kids' work, check out the games and toys, join in the activity center, and check out the Fish and Ships site. Very well done. Simply laid out.	4	5	K–7
http://cuiwww.unige.ch/meta-index.html	**Index of all Search Engines.** If you need them, here they all are. Learn how to use them fully by clicking on the "search tips" section at each of the sites. Try just one or two engines initially to get to know their nuances.	3	5	all
http://www.asd.k12.ak.us/Other_Ed/Education/EdLISTSERVS.html	**Educational Electronic Mailing Lists.** You can send off a bit of e-mail and join one of the seven servers specializing in education information. Schools and institutions tend to use education mailing lists to advertise for classes to join projects, list good sites, or state problems they may be experiencing.	3	5	all
http://www.cheathouse.com/index.html	**The Evil House of Cheat.** Your students can come here and for $10 have a year's access to more than 9,500 essays on any subject from science and math to great composers and Shakespeare. Teachers need to be aware these sites exist as students know all about them. There are 480 essays on Shakespeare and his plays and sonnets, and each one is graded so students can supply their teacher with a paper that is at their ability level! The site teaches teachers that they need to steer away from very general topics and encourage use of more compare and contrast, analysis, and predicting (i.e., higher order thinking) skills.	5	5	all
http://www.bartow.k12.ga.us/psych/main.htm	**The School Psychologists' Home Page.** The highlight here is the Crisis Intervention Resource Manual. Presented here for all school counselors and psychologists, this is a major resource available free of charge. Good content and presentation.	4	5	all

Excite (science/math)	http://www.excite.com/	**HotBot** (specific)	http://www.hotbot.com/
AltaVista (general)	http://www.altavista.com/	**Yahooligans** (K–12 only)	http://www.yahooligans.com/
Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

URL	Comments	presentation	content	grade level
http://www.csulb.edu/gc/	**Global Campus.** This is a database of material—mostly other sites—organized into six disciplines. Mostly relevant for high school students.	5	4	7–12
http://scholastic.com/Instructor/	This is the **Scholastic magazine *Instructor*.** Some useful material is here on assessment and approaches for integrating curricula. Some good links here to other sites as well as educational issues.	5	4	K–8
http://www.thinkquest.org/	**Think Quest is a contest for students to design a web site.** Successful schools can receive some quite substantial rewards, but read the fine print. There are three categories, and this is a great incentive for senior students.	5	3	7–12
http://www.liszt.com/select/Education/	Liszt Select: Education. This is a very comprehensive **list of list servers and news groups for education,** providing a well-balanced range. You can check out the others at http://www.liszt.com/ which has more than 1,000 e-mail discussion groups.	4	4	all
http://www.encyberpedia.com/ency.htm	**Encyberpedia.** This free collection of encyclopedic information is very good and covers every topic imaginable. A search engine makes finding information straightforward. This is also a good site to use to teach search strategies and key word use.	4	5	all
http://www.maillist.com/hotlists.htm	**The Best Mail Lists.** This list of the best mail lists available is very extensive. Plenty deal with education and specific subject areas. Management and issues in education all have their own mailing lists. Be cautious signing up to too many as you can end up with hundreds of messages each day! Each list will send you an unsubscribe message; keep this in a separate mail folder so you can stop the onslaught if it gets too much for you.	4	5	all
http://www.worldvillage.com/ideabox/index.html	**Idea Box: Early Childhood Education & Activity Resources.** This site has a lot of material for teachers of grades K–3—everything from seasonal activities to projects, games, and lots of printable pages for the classroom. There are also some songs and music for the kids along with recipes (play dough), craft ideas, and stories. Take time to review this site and use the resources wisely, and this site will save you a lot of time.	5	5+	K–3
http://www.ncrel.org/cscd/leadacad.htm	**Leadership for Learning.** For school managers this site provides a one-stop shop, allowing you to locate research and debate on the main issues facing school management such as technology implementation, school reform, and school and community issues.	4	4	all
http://www.developer.com/directories/pages/dir.java.educational.html	**Java for Education.** Looking for that activity tool or applet to add to your Internet or intranet school setup? Hundreds of them are here in every educational area from math to the arts. With 189 physics applets and 354 math applets, this site is well stocked.	4	5	all
http://www.muskingum.edu/~cal/database/database.html	**Learning Strategies Database.** This is an excellent collection of strategies for maximizing student learning. Collected over a period of 10 years, the collection is extensive and the presentations are highly readable and have good practical insights. The site is a great resource when you are confronted with a difficult situation or a concept students are struggling with. Read the introduction on how to use the database first as this can save a lot of time.	5	5+	all
http://www.learningkingdom.com/gaggle/	**Gaggle: Groups of Animals.** Students can use this fun, online resource to teach themselves the names of the different groupings of animals. The easy-to-follow and well-orgnaized site has four parts: terms for groups of animals, a self test on what they have learned, the Gagglexicon, and, finally, a challenge for those who complete the first three parts.	5	4	K–8

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URL	Comments	presentation	content	grade level
http://www.gsn.org/index hi.html	**Global SchoolNet Foundation.** This massive site makes a great starting place for educators (after this text and the teachers@work directory of course). It offers some good site listings but also some good support information on integrating computer information into the classroom. Check out the Global Schoolhouse for some great projects.	5	5+	all
http://www.epals.com/	**ePALS Classroom X Change.** Join 7,900 other classrooms in 80 countries around the world to exchange information. Search the database to find classrooms in your region, or check out classrooms in countries you are studying in social studies or language class. Excellent free service.	5	5+	all
http://curry.edschool.Virginia.EDU/go/specialed/	**Office of Special Education.** This is a good resource for teachers working in the area of special education. It offers background information, resources on the Internet, and a very good parent information/support section that could be modified for issue to parents or used as the basis for a welcome and introduction to what the school offers students.	4	4	all
http://www.ozemail.com.au/~caveman/Creative/	**Creativity Web.** We all wish we or our students were more creative. So how do we become more creative? This site has some excellent suggestions and ideas to improve creativity in the classroom and our lives in general.	4	5	all
http://www.fln.vcu.edu/ld/ld.html	**The Foreign Language Teacher's Guide to Learning Disabilities.** This very comprehensive site deals with all aspects of LD with good sections on auditory deficits, dyslexia, ADHD, ADD, and hyperlexia among others. Not just for teachers of foreign languages, the site is very generic.	4	5	all
http://www.hood.edu/seri/serihome.htm	**Special Education Resources on the Internet.** This collection of Internet-accessible information resources deals with all aspects of special education. Topics include vision impairment, hearing impairment, autism, mental retardation, and parent and educator resources. The Special Needs and Technology section is worth a look.	4	5	all
http://www.nfgcc.org/	**The National Foundation for Gifted & Creative Children.** This site is very popular as a source of updated information in this area. It has news articles and research information as well as links to other sites.	4	5	all
http://thorplus.lib.purdue.edu/reference/index.html	**The Virtual Reference Desk.** A good site to add to favorites/bookmarks. It contains popular reference materials such as dictionaries, a thesaurus, basic science data, world phone books, IT information, calendars, and more.	4	4	all
http://www.theage.com.au/education/livewires/	**LiveWires: The Internet connection for 8–13 year olds.** Excellent material here changes regularly. There are good ideas for teachers in terms of planning for units of work as well as lists of good sites that deal with the issues of the day. An archive of all the previous weeks' offerings appears under the main theme of the material. Very useful site.	4	5	2–8
http://www.theage.com.au/education/surfsite/	**SurfSite: The Internet connection for Secondary (grade 8–12) School students.** Similar in set-up to LiveWires, this site is equally useful but with more subject-specific themes. Good content and great for keeping new ideas flowing through the school.	4	5	2–7
http://www.wested.org/tie/dlrn/	**Distance Learning Resource Network.** As schools increasingly share work and carry out collaborative studies, the impact of distance learning is becoming all the more evident. This site has some excellent words of wisdom on this topic with good examples, research information, and news and reviews.	5	5+	all
http://owl.qut.edu.au/endeavour/	**The Endeavour Project.** Join four toys—Neddy Numbat, Betty Bilby, Penny Platypus, and Walter Wombat—as they travel on the replica of the *Endeavour* following Captain Cook's voyages. Read their adventures and e-mail them a question.	5	4	K–8

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http://www.pitsco.com/p/listinfo.html	**Pitsco's Launch to Educational Listservs.** If you cannot find a listserv to suit you here, something is wrong. This site offers almost 200 of them, covering every aspect of education from physics to educational media to teacher education. Easy site to use and something for everyone.	4	5+	all
http://genxtvland.simplenet.com/SchoolHouseRock/	**Schoolhouse Rock.** Here are all the words and tunes to those great songs kids sing along with so they remember their times tables, grammar rules, and basic science principles. This site is excellently presented; students could teach the rest of the class one of the songs each week.	5	4	K–8
http://www.eka.com/	**Solutions for Disabilities.** This excellent site looks at "linking people with disabilities and chronic health conditions to resources, products, and services that promote active, healthy, independent living." Well-presented site is easy to move around in. There is a lot of information here for all students with disabilities and their teachers.	5	5	all
http://www.ash.org.au	**Aussie Schoolhouse: oz-TeacherNet.** The Australian version of the Global Schoolhouse. This site is extensive and has links to plenty of sites relevant to the various curriculum areas. The support is for both teachers and students. Access information through Communities, Projects, Research, Training, Events, and Joint Ventures.	5	5	all
http://www.campuslife.utoronto.ca/handbook/learning/studyskills.html	**Study Skills.** Here is a good introduction to good study skills from the University of Toronto handbook. Good tight material well presented and useful for senior students.	4	4	9–12
http://www.theaustralian.com.au/index.asp?URL=/papers/aus.htm	***The Australian.*** The newspaper! An excellent source of information on all aspects of education. Use this site for language work, science, IT, and the arts. The online version is much easier to handle than the real newspaper, and you can select what you want to print out and be your own editor!	5	5	all
http://www.greatkids.com/	**GreatKids Network.** Attitude is everything, and this site provides material to help teachers develop positive attitudes in their students. It presents stories about kids who have gone that extra step. Some have set up international programs to help find lost kids, some have set up businesses, others have been involved in community work that has had national significance. Kids can do anything when shown the process and made aware of the opportunities. Inspirational site.	4	5	K–8
http://www.benton.org/Library/Schools/home.html	**The Learning Connection: Schools in the Information Age.** Schools are in the information age whether they recognize it or not. How are we, as teachers, to adapt to this age, and what are the implications to the philosophy, mission, and management of the school? This article addresses these concerns and does so very well. A must-read for all education managers.	4	5	all
http://www.multi-intell.com/	**New Dimensions of Learning: Experiencing Multiple Intelligences.** The concept of multiple intelligences has been around for some time now but is only recently gaining wide recognition as a valid education paradigm. This site provides a background to what it is and how to apply the intelligences theory in the classroom.	4	4	all
http://www.bemorecreative.com/FamousI.htm	**Creative Quotations From Famous Inventors, Scientists and Explorers.** Need a little bit of creative language to start the day? Check out this site to find what the greatest minds have had to say about creativity and innovation. Great site to use each week or day to encourage students to think as well as learn.	4	5	all

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

URL	Comments	presentation	content	grade level
http://www.ucc.vt.edu/stdysk/stdyhlp.html	**Study Skills Self-Help Information.** This is a comprehensive site for those who help others study or who study themselves. Some good material here and lots of it, covering topics such as procrastination, remembering, improving reading speed, stress management, and much more.	4	5	6–12
http://www.zip.com.au/~elanora/trees.html	**Elanora Heights Primary School: International Trees and Forests Project.** Students of Elanora Heights school have created an excellent HTML project on trees and forests of the world. Good indicator of what students can accomplish.	4	4	K–8
http://www.cyberteens.com/ctmain.html	**Cyberteens.** A place for cyberteens to call their own, with a mission to promote a worldwide culture and provide a place they can express their creativity. This Net village is monitored fairly well and seems a safe place to visit.	5	4	9-12
http://smiley.logos.cy.net/bdecie/	**The World Wide Holiday and Festival Page.** Holidays are a very common theme in grades K–8, and this page provides excellent support information on different countries and their respective religious and government holidays.	4	5	K–8
http://www.mindspring.com/~l-mills/	**Forgotten Kids: Learning Disabled Children.** One hopes this title does not apply to all these children, but the authors' approach is to recognize and then assist children with "invisible difficulties."	4	4	all
http://www.mightymedia.com/keypals	**KeyPals Club.** Schools are always asking for sources of e-mail addresses of schools. This is a large collection from all over the world. Schools outside the United States are very popular.	4	4	all
http://www.sjsu.edu/depts/itl	**Mission: Critical, Critical Thinking Web Page.** This site introduces both the teacher and the student to the processes behind critical thinking. In this age of information overkill, this has become an essential skill that every teacher should have an insight into and every child should have the opportunity to learn.	4	5	all
http://www.monsterboard.com/	**The Monster Board: Jobs On Line.** With the ever-changing employment outlook, one way to inform students about what jobs are out there is to have them go and look at what is offered. This site would make a great individual study program if the teacher develops a worksheet to go with it and has students explore the possibilities and gain some inspiration.	4	5+	6–12
http://www.hsc.csu.edu.au/study/esl/sswork.html	**Reading to Learn.** This site is well worth a look by both teachers and students. Three pages from a workshop run by Tina Sharpe offer excellent, concise advice about reading and learning at the same time!	4	4	6–12
http://www1.minn.net/~schubert/SSFplan.html	**Signs of Autumn/Signs of Spring.** This telecollaborative project starts every six months and caters to both hemispheres. Activities are suggested, and students study the autumn and spring changes and share their information with each other. A weekly magazine records the observations and is available to all students online.	4	5	K–6
http://www.nyise.org/whatsnew.htm	**Blindness Resource Center: What's New on the Web.** The wonderful thing about the Internet is that the technology is empowering and provides a window to the world of education for everyone, even the blind. This site has grown at a fantastic rate. This service keeps you up to date with the site and the technologies that can bring the world a little bit closer.	4	5+	all
http://snow.utoronto.ca/	**SNOW: Special Needs Opportunities Windows.** This is a resource site for teachers working with special needs students either in the mainstream class or in special classes designed to meet the needs of these students. The site offers curricula, technical support, professional development, web resources, and forums.	5	5	all

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http://www.smalloffice.com/	**Smalloffice.com** This great site has reviews to assist in improving your efficiency and the efficiency of your management and office systems. Everything from technical tips and reviews to management and sales.	4	5	all
http://www.uoguelph.ca/csrc/learning/multchoi.htm	**Fastfax: Multiple Choice Exams.** This excellent presentation from the University of Guelph looks at the preparation for and sitting of multiple choice exams. The paper suggests ways students can prepare for multiple choice tests through planning study time, effectiveness strategies, and practice sessions and offers advice for taking the tests such as time allocation and processing the information presented.	4	4	6–12
http://www.classroom.com/resource/citingnetresources.asp	**Citing Internet Addresses.** A new and essential part of the teaching process. This site goes concisely through the procedures for each type of Internet resource such as web pages, e-mail, and gophers.	4	4	all
http://www.edweek.org/	***Education Week.*** The online version of this very popular newspaper has all the latest on the trends in education as well as archives of past editions.	4	5	all
http://www.ozemail.com.au/~oban/index.html	**Animals, Myths & Legends.** Let Oban the Knowledge Keeper guide you through myths, legends, and stories. Excellent graphics here.	5	3	K–8
http://www.leaderx.com/	**Leadership Strategies.** This site from a consulting firm has some excellent material suitable for senior students. The firm works with business executives to improve their leadership skills and, ultimately, their business acumen and success. Check out the leadership quiz.	4	5	all
http://www.soe.gonzaga.edu/rr/	***Research & Reflection:*** A Journal of Educational Praxis from Gonzaga University has articles on a range of educational issues and curricula, including integrating technology into the school structure as well as curriculum areas. Previous issues are all archived.	4	4	all
http://www.gsh.org/wce/	**The Global Schoolhouse.** There is a lot here, so take your time. Articles, forums, columns, and features deal with all aspects of education. Very concise and to the point.	5	5	all
http://www.siec.k12.in.us/~west/proj/owl/	**Something Fishy: Book Reviews and Activities for Primary Grades, Oceans.** A great site to come looking for information on the theme of oceans. The use of the *Owl and the Pussy Cat* to introduce the oceans theme sets the tone for this site. It also has idea starters, quizzes, and links to sites about the Galapagos Islands.	4	5	K–6
http://www.fs4jk.org/	**Farm Safety 4 Just Kids.** Many young people who grow up in the country face a range of potential dangers everyday. This site does an excellent job of making students aware of the potential dangers and what they should do if something does happen to them or a friend. There is a parent's and a kids'site as well as an online quiz to see how much kids learned from Dr. Danger! The site is part of a program to reduce farm deaths involving children, and the Farm Safety 4 Just Kids organization has more than 78 chapters. Very well laid out site with good graphics.	5+	5	K–6

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SkyLight Training and Publishing Inc.

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http://www.adobe.com/prodindex/acrobat/readstep.html	**Adobe Acrobat.** Information downloaded from the Internet is often available in PDF (Portable Document Format), which maintains the formatting. PDF is an excellent tool, but to read documents sent in this format, you need software that is available free from this site.	4	5	all
http://www.bham.wednet.edu/science.htm	**Explorers of Ideas.** The thinkers are often the bravest explorers of all. Here is a collection of biographies and backgrounds of some famous thinkers. The obvious ones such as Einstein are here and so are the less well known such as Charles Drew. Most are from a science orientation, but notables such as Martin Luther King and Arthur Clarke also make the grade.	4	4	all
http://www.nobully.org.nz/	**No Bully.** Bullying is a global problem, and this site addresses it well with honesty and some good common sense. Aspects of the site are for adults, children, and bullies! Good ideas; test your responses to bullying and get some good advice.	5	4	all
http://www.ala.org/parentspage/greatsites/guide.html	**The Librarian's Guide to Cyberspace for Parents & Kids.** The Internet has so much to offer, but it has as many disappointments as opportunities. This site offers safety tips, good advice from seasoned professionals, and a question-and-answer section for kids and parents.	5	4	all
http://www.amazon.com/	**Amazon.com: The World's Largest Bookstore.** With more than 2.5 million books in its cyberstore, this very impressive site is one of the few commercial sites to make it onto this database. Teachers from anywhere in the world can browse here and find the latest material available in whatever field they desire.	5	5	all
http://www.acinet.org/	**America's Career InfoNet:** This very thorough site covers a huge range of careers. In addition to a good search engine, it provides information in such areas as employment outlook, expected salary, training requirements, geographic profiles, and resources and trends. A one-stop shop for career information for students.	5	5+	8–12
http://fromnowon.org/toolbox.html	**Filling the Toolbox: Classroom Strategies to Engender Student Questioning.** Excellent two-part insight into the art of questioning. The classic teacher traits are examined and rearranged to encourage development of higher order thinking skills. A brief, easy-to-read report that all teachers should copy and read at their leisure.	4	4	all
http://bible.gospelcom.net/bible?	**The Bible OnLine.** The world's most popular book is now online and can be searched by a touch of the button (much easier than dragging the concordance out all the time). Choose the version you want to search, add some key words, and you are off. You can also search via topics with more than 22,000 topics available.	5	5+	all
http://www.fromnowon.org/nov97/toolkit.html	***From Now On:* A Questioning Toolkit.** This is an excellent feature from an excellent online educational journal. The key is not what we know but what we can access, and to do that we must be able to ask the right questions and know where to get that information. This is the core of the information age. In schools, we tend to overemphasize the answer and not expect students to question or challenge. This article sets the scene for teaching questioning skills.	4	5+	all
http://www.exploratorium.edu/memory/	**Memory.** This great site deals with something we all wish we could improve. The site includes some good online exhibits: a sheep's brain dissection to discover the anatomy of memory, the memory artist, and articles on understanding and improving the memory that we have.	5	5	all

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http://www.sct.gu.edu.au/~anthony/kites/	**Anthony's Kite Workshop.** Kites are part of school life. They are used in integrated units involving art, science, math, and language. This site provides plans, ideas, cartoons (including the infamous kite-eating tree), and lots of links to all the information one could ever want.	4	5	all
http://scrtec.org/track/index/all.html	**TrackStar.** A track is a site developed around a theme with supporting questions and sites that supply the necessary background information. Excellent learning centers, each track is a complete unit in itself or it can support a unit studied in class. You can also write your own tracks on topics you wish to pursue. The tracks are easy to develop and take about 10 minutes to publish if you know the sites you wish to include.	4	5	all
http://www.conceptmapping.com/inspclass.html	**Inspiration: Education Edition.** Inspiration is concept-mapping software. It is invaluable in the classroom for both teachers and students. The site provides classroom ideas and background information on how the software can help students organize their thinking and its appropriate applications.	5	4	K–12
http://www.vsa.cape.com/~powens/Kidnews3.html	**KidNews: Kids Writing from Practically Everywhere.** This excellent collection of news from around the world is written by kids, for kids. One application for this site is to include some of the stories and poetry in the school magazine each week to add interest and compare the work of students in other countries.	5	4	K–8
http://www.sonoma.edu/CThink/	**The Center for Critical Thinking.** For those who encourage the use of critical thinking skills, this an excellent site to keep up with news, conferences, and research in this area. Excellent material for all teachers. Good introductory work as well as advanced material, classroom suggestions, and much more.	5	5	all
http://www.kfs.org/kites/zoo/Welcome.html	**The Virtual Kite Zoo.** Why not? An excellent collection of every type of kite imaginable (50 so far), but please do not attempt to feed the specimens. There are plans, sketches, photos, and ideas on how to integrate kites into your curriculum, lots of little historical snippets, construction hints, materials to use, and suggestions for variations.	5	4	all
http://www.holidays.net/	**Holidays on the Net.** People celebrate holidays for all sorts of reasons: historical, religious, political, social, cultural, and academic. This site lists the history and the variety of holidays around the world. Great information for investigating the diversity of cultures.	4	5	all
http://www.exploratorium.edu/learning_studio/satellite/sat.html	**The Great Satellite Search.** This is a guided project to look at how to use the Internet to research, organize, and present information. Students work in teams in a cooperative search. Students are asked to hone in on a satellite and carry out research. Information to support the task is provided. This site makes an ideal introduction to the sift, sort, and scan aspect of information management at all levels.	5	4	9–12
http://www.sjusd.k12.ca.us/sites/mid/Burnett/school.life/msl.project.html	**Middle School Life.** This is a global comparison of middle school life. Students can enter issues and receive information on schooling and lifestyles around the world. Good information for comparison and contrast activities. Aimed at grades 6–8.	4	4	6–8
http://www.headbone.com/	**The Headbone Zone.** This site has some good content, including education adventures, games, and "edutainment" material. Well-crafted, it makes a good reward site.	5	4	4–12

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http://www.enchantedlearning.com/Dictionary.html	**Little Explorers: Picture Dictionary with Links.** This is a great site to introduce students in grades K-1 to the Internet. Click on a letter and a series of words appear. Each of the words is used in a suitable sentence, then most of the words are linked to a web page that deals with the object of focus. To develop language skills, the words are available in English/French, English/German, English/Portuguese, and English/Spanish.	5	5	K–1
http://www.clark.net/pub/lschank/web/library.html	**Library & Information Science.** The aim of this site is to provide pointers to librarians so they can find information dealing with library information servers/services and librarianship. Libraries are undergoing a radical redefinition in this information age, and the skills required of the emerging librarian have changed in essence little but in practice much. This site provides pointers to sites that assist in this transition.	4	5	all
http://www.askjeeves.com/	**Ask Jeeves.** Search engines are often not suitable for students who really want to ask questions in their natural format. While some search engines do allow this form, Ask Jeeves returns good results. Just type in the question "Why is the sky blue?" and Jeeves the butler checks that he understands the question by asking some qualifying questions and then rushes off, tray in hand, to find sites that fit your need. Excellent.	5	5	all
http://www.ash.udel.edu/ash/	**The Alphabet Superhighway.** Check out these activities and the online magazine dealing with language in the classroom. There are challenges for students to tackle as well as a helpful tutor to assist with individual progress. Read the information for teachers and parents before starting out.	5	5	K–6
http://www.ganharmony.org	**Gan Harmony.** This Israeli-based site describes Joan Shrensky's work with special-needs children. Where many failed, Shrensky succeeded. The process of inclusion she has used is set out here as well as the therapies and systems she has applied.	4	5	all
http://www.pbs.org/wgbh/nova/sunken/	**Treasure of the Sunken City: The Pharos Lighthouse.** One of the seven wonders of the world, the Pharos Lighthouse was discovered underwater off the coast of what is now Alexandria. This site from NOVA provides some excellent background about the lighthouse, its riches, and the lives of the people during the time of its use.	5	4	all
http://www.ed.gov/pubs/parents/internet/	**Parents' Guide to the Internet.** This site provides an excellent introduction to parents on what the Internet is and is not. Incorporate it into the school policy, and make it available at the school office.	4	5	all
http://www.gsh.org/wce/articles.htm	**The Global Schoolhouse: Articles, Columns & Special Features.** This excellent web site presents up-to-date and well-written articles dealing with every aspect of education. It includes a lot of material on the use of the Internet within schools and other technological advances that impact schools as well as material dealing with management and curriculum. Check it out each month.	5	5+	all
http://www.liszt.com/	**Liszt, the mailing list directory.** If you want to get mail every day, come here and join a mailing list or two. The site offers more than 100 education lists alone. Join lists on every topic you can imagine—a social studies news list, a music genre list, a nature list, a computer list, or many others.	5	4	all
http://ericir.syr.edu/Virtual/	**AskERIC Virtual Library.** This library offers tools to research topics related to pedagogy and educational research. It also has a collection of more than 1,000 approved lesson plans, guides on themes, and a special topics section.	5	5+	all

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AltaVista (general)	http://www.altavista.com/	**Yahooligans** (K–12 only)	http://www.yahooligans.com/
Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

URL	Comments	presentation	content	grade level
http://www.ag.uiuc.edu/~disaster/teacher.html	**Children, Stress, and Natural Disasters.** This excellent site provides teachers with a comprehensive set of activities and advice to help students cope should they experience a disaster and to prepare them before such an event occurs. The site has a set of school activities designed for classroom use as well as curriculum guides and links.	4	5	all
http://putwest.boces.org/PVLinks/Research.html	**Doing Research and Educational Study on the Internet.** This site provides a starting point for teachers looking for information and research documents to assist with their studies or with classroom/school needs. The site highlights Research Centers, Data Banks, Organizations, and Journals.	4	5	all
http://www.aspensys.com/eric/cgi/ccal.cgi	**ERIC Calendar of Education-Related Conferences.** Do you need to upgrade your professional skills but are not sure where to do so? This site lists hundreds of conferences around the world. Simply type in the subject or city/country and the dates and receive all the conferences that meet your criteria complete with links to their associated web pages.	4	5	all
http://wwwcoh.modlang.arizona.edu/inst/edp512s97/learningtheory.html	**Learning Theory.** This very comprehensive collection of links covers all aspects of learning theory, including debates, modern and ancient concepts, assessment, collaborative learning, the effects of technology on learning, and much more.	4	5	all
http://stats.bls.gov/k12/html/edu_over.htm	**Career Information: Jobs for Kids Who Like . . .** Excellent concept from the Bureau of Labor Statistics with a set of options for kids who like Music/Arts, Math, PE/Outdoors, Science, Reading, and so on. The site offers an excellent teacher's guide as well as statistics on each of the various careers.	5	5	all
http://www.funschool.com	**Funschool.com** This is an excellent site for introducing preschool through grade 2 students to the Internet. The site has a lot of fun activities and projects and all are excellently presented. Material here deals with the various topics and curriculum areas teachers traditionally use in the classroom.	5	5	K–2

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

Health & Wellness

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http://www.chronicillnet.org/	**Chronic Ill Net.** This excellent site looks at chronic illnesses such as cancer, AIDS, and chronic fatigue syndrome. This site is well laid out with some excellent research information and advice for caregivers.	5	5+	all
http://www.academic.org/	**Expect the Best from a Girl. That's what you'll get.** Opening with this very practical advice, this site dispels some still very commonly held beliefs by both teachers and the general public about the abilities and potential of girls. This site is designed for teachers and parents but is also worthwhile for students. Excellent site.	5	5+	all
http://www.dole5aday.com/	Dole 5 a Day. A fun site for younger children **promoting fruit and vegetables** in the daily diet. It presents nutritional information and the need for a balanced diet in a fun and entertaining way.	5	5	all
http://www.lifelines.com/	**LifeLines@work is one of the most comprehensive health pages on the Net,** with information on health, fitness, and nutrition as well as links—353,000 visitors can't all be wrong!	5	5	all
http://www.parentsplace.com/	**ParentsPlace.** This excellent site looks at the problems parents,face and teachers may face acting *in loco parentis*. It has very good health and nutrition sections and a good section on preschool.	5	5	all
http://golfweb.com/	This great site offers all the golf you could ever want. **GolfWeb** is so large it is divided into geographic sections, and it presents scoreboards from around the world, coaching tips, and great courses around the world.	5	5	6–12
http://www.biomech.com/	***BioMechanics:* The Magazine of Body Movement and Medicine.** Now this is getting technical, but it's a great site all the same with excellent articles. Subscribe to the journal, or just access all the free material here. Very readable.	5	5	6–12
http://www.columbia.edu/cu/healthwise/	**Alice!** is an award-winning interactive **health question-and-answer service** from the Columbia Unviersity Health Service. Students can do a keyword search of existing FAQ (Frequently Asked Question) databases on areas such as sexual health and relationships, alcohol and drugs, fitness and nutrition, and more.	5	5	6–12
http://science-education.nih.gov/nihHTML/ose/snapshots/	**Snapshots of Science and Medicine.** This digest of events, people, and research offers teachers and students a good way to keep up with the world of health and medicine. Not too technical, the information provides good background information for teachers and senior students.	5	4	8–12
http://www.geocities.com/Colosseum/Stadium/7261/index.htm	**Non-Traditional Gymnastics.** Looking to add an extra bit of zing to your gymnastics program? Come to this site. It offers a justification and introduction to this genre of gymnastics and an excellent range of activities, lessons, and assessment tasks. Very thorough, it also has some excellent ideas even for the less adventurous.	5	5	all

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

SkyLight Training and Publishing Inc.

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http://www.cdc.gov/	**Centers for Disease Control and Prevention (CDC).** This excellent site looks at all aspects of health, including morbidity rates, scientific data, publications, travelers' health, and extensive information on all manner of diseases.	5	5	4–12
http://www.runnersworld.com/	The electronic version of the top running magazine ***Runners World***. Anyone into running any distance will find this site an excellent read. Sections cover women's running, nutrition, injuries, and much more. Excellent site with plenty of content.	5	5	4–12
http://www.who.org/	**The World Health Organization.** This huge site looks at global health issues. A very comprehensive and exhaustive site.	4	5	all
http://www.fao.org/WFS/homepage.htm	**World Food Summit.** This site looks into the increasingly difficult task of feeding everyone on the planet. The information here relates to the 1996 summit. Of particular interest is the draft action plan for achieving World Food Security.	4	5	all
http://www.users.lida.net/mojo70/	**First Aid On Line.** This excellent self-help site has a question-led approach to solve any minor first-aid problem. Excellent advice provided at a level very appropriate for students.	4	5	all
http://www.nando.net/SportServer/basketball/	**The Basketball Server.** The NBA, the ABL, and the WNBA are all here as well as coverage of the national high school league. Results, profiles, scoresheets, and backgrounds to all the basketball you need.	5	5	all
http://educ.ubc.ca/dept/cust/pe/	**A Great Physical Education Site.** This site offers a list of great resources for PE teachers and, according to the authors, one can use them to learn more about topics relevant to teaching students in movement and physical activity settings and how to incorporate technology into your teaching.	4	5	all
http://www.princeton.edu/~rcurtis/oa.html	**The Princeton University Outdoor Action Program.** This is one of the most popular outdoor education sites with more than 13,000 visitors per week. It has up-to-date information on equipment from packs to crampons, minimal impact camping, and all variety of outdoor education activities from canoeing to speleology. It also has links to numerous other sites.	4	5	all
http://www.magna.com.au/~prfbrown/tubelink.html	**Global Oceanic Surf Links.** The sport of surfing has become a major commercial enterprise and the techniques in both board riding style and boad making have come a long way from the laid-back beatnik image of the '60s.	4	5	all
http://www.princeton.edu/~rcurtis/hypocold.html	**Outdoor Action Guide to Hypothermia and Cold Weather Injuries.** This is an excellent guide for all teachers taking students into the outdoors. Much of it can be printed out for senior students and parents. It could also form part of the school's policy regarding health and safety in this area.	4	5	all
http://www.niehs.nih.gov/kids/hottopics.htm	**Kids' Page: Hot Topics in Environmental Health & Science.** From the National Institute of Environmental Health Sciences comes this great collection of links and articles to hot topics such as cloning, in vitro fertilization, immunization, and the fight against AIDS and cancer. Great research site for students to use for an oral presentation on one of the topics presented.	5	5	4–12
http://pages.prodigy.com/CA/nutrigenie/home.html	The home page from NutriGenie, one of the world's leading producers of **nutrition-related software.** Visitors are able to download a large variety of evaluation copies of this software (mainly Windows based).	4	5	all
http://www.fitnesslink.com/changes/kidsfit.htm	**Fitness for Kids.** A simple collection of exercises for students. Simple graphics outline the exercises that are ideal for teachers who have little background in this area.	4	4	K–8

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http://www.primenet.com/~midds	**Big Wall Climbing Home Page.** This very comprehensive site looks at big wall rock climbing. Plenty of information for all those keen on taking themselves well past what the body was designed to do and survive. The classic climbs are all here as well as stories of those who survived and some who did not.	4	5	6–12
http://www.avoncrusade.com/	**Avon's Breast Cancer Awareness Crusade.** This excellent site looks into this very topical health issue. Mostly a teacher reference site, but it's very informative and well laid out.	4	5	6–12
http://www.siteworks.co.uk/pperf/	**Peak Performance.** This site is a no-nonsense scientific newsletter devoted to improving stamina, strength, and fitness, so it claims, and it does indeed deliver. You can subscribe, but they offer a lot of material online for no cost.	4	5	6–12
http://education.indiana.edu/cas/adol/adol.html	**Adolescence Directory On-Line.** If you cannot get enough of them during the school day, then check them out in cyberspace out of hours. Actually, this is a great site for teachers and students that looks at all aspects of adolescence. As a links site, it may take some working through to get what you want.	4	5	6-12
http://www.tennisserver.com/Tennis.html	**Tennis server!** It was too easy to name this site. With more than 14,000 subscribers to this free newsletter, they've got a lot of people to call on. If you are into tennis, this is a worthwhile site for good links, coaching tips, equipment information, and a who's who in tennis.	3	5	4–12
http://www.havenport.com/hosa/official.html	**Havenport Basketball Resource.** This is the complete basketball site with an emphasis on coaching. It has coaching discussion boards, e-mail lists, and a Coaching Live Meeting Room. Coaching videos are reviewed, and there is an art gallery and lots of links to your favorite team or league.	5	4	all
http://www.sikids.com	***Sports Illustrated for Kids.*** This is a great site with its own remote! The site focuses primarily on football, baseball, and ice hockey, but there is good coverage of all the top sports and some good material here.	5	4	all
http://espnet.sportszone.com/	**ESPN Sportszone.** Widely regarded as one of the best sources of sports news and stories on the Internet, this site is very current and very well presented.	5	4	all
http://www.countrybarn.com/08di1.htm	**Line Dances.** Yes, get into the Slam, the Elvira Freeze, and Ground Zero. These dances and 65 others are here. Check out the moves and get the kids into line!	4	5	all
http://cnnsi.com/	***Sports Illustrated.*** Yes, this is it. The most popular sports magazine online. A huge range of sports is covered. Check out *Sports Illustrated for Kids*, which is worth looking at for kids' material and great ideas—also allows older people to keep up with the jargon!	5	4	all
http://www.worldguide.com/Fitness/hf.html	**Worldguide Health & Fitness Forum.** A well-presented and easy-to-use site with good material on anatomy, strength training, cardiovascular exercise, eating well, and sports medicine.	5	4	6–12
http://www.fxmedia.com/arnold/coloringbk.html	**Arnold Schwarzenegger's Fitness for Kids Coloring Book.** Simple idea: four pages to print and use to support a fitness program for students in grades K–3. The site also provides sections on cycle safety, good eating habits, and fitness.	5	4	K–3

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URL	Comments	presentation	content	grade level
http://hotel.hawkesbury.uws.edu.au/~geoffs/	This **excellent food, nutrition, and health resource** is maintained by a professor at the Centre for Advanced Food Research at the University of Western Sydney. Well-presented with good graphics, this site provides a veritable feast of nutrition information.	5	4	all
http://www.xnet.com/~schneid/vball.shtml	**Schneid's Volleyball Page.** This is the consummate page on volleyball. Great pages for coaches with good information on drills for serving, defense, bumping, footwork, jumping, and much more. Offensive and defensive schemes are laid out as are rules, score sheets, and statistics and record-keeping sheets. Additional information on stretching, aerobic conditioning, sports medicine, and nutrition. A very comprehensive site.	5	5+	all
http://www.clark.net/pub/pribut/spsport.html	**Dr Pribut's Running Injuries Page.** Some very good preventive medicine, and not just for runners. The advice here is just as valuable for all sports people, is based on good common sense, and is presented very well. There is also a section on children's sports injuries and a very good section that examines basic biomechanics. Excellent site for all physical education teachers.	4	5	all
http://pe.central.vt.edu/	**PE Central.** This is possibly the most comprehensive PE site available on the web. This site has everything from health issues to coaching tips, lesson plans, assessment ideas, news and information, and professional information and support as well as tips and ideas for the day. This will probably be the default page for many PE teachers, and information is constantly added and updated.	5	5+	all
http://outside.starwave.com/	***Outside Online.*** Online version of the magazine. There are some excellent articles on fitness as well as the usual climbing and tramping/hiking reports and articles, and The Gear Room makes you drool. Very well-presented site with snappy articles that will interest teachers and students alike.	5	4	all
http://www.mcphu.edu/~corrp/tap/	**Tap Dance Homepage.** With the release of a few films and Broadway shows highlighting the skills required for this style of dance, it seems to be undergoing a renaissance of late. The highlights here include a mailing list and a search engine for this site and others dealing with tap dancing. It has articles, reference materials, and even audio and video clips.	4	4	all
http://www.tms.tribune.com/rjt_fitness/index.htm	**The Fitness Files.** The sections Fitness Fundamentals, Get Active, The Injurenet, and Fuel for Fitness all deal with aspects of the fitness regime. Excellent site, particularly good level for middle and senior high students. There is a range of very good ideas and exercises; the flexibility test, target heart rate test, and strength test are in just one area at this comprehensive site.	5	5+	all
http://home.eznet.net/~stevemd/juggle1.html	**Learn to Juggle in Six Steps.** Just watch those Java balls, and apparently after following these six steps, you can juggle. It all looks like a scene from a cartoon rather than a serious attempt at physical exercise. But kids will pick it up before you have even finished typing in the URL!	5+	4	all
http://www.tossed-salad.com/	**Tossed Salad Productions.** Meet Healthy Herb and the virtual interactive playground. Focus here is on healthy eating in a style that will interest grade K–8 students. Well-presented, high-interest site.	5	4	K–8
http://www.hillarysport.org.nz/kids/hyper/index.html	***Hyperzine.*** An online magazine dealing with health and sports issues and events. Well-presented information relates well to grades 3–8. There are profiles of sports people with an emphasis on fair play and involvement rather than competition and prize money. Good material.	5	4	3–8

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http://www.danceonline.com/index.html	***Dance on a Line.*** This excellent, professionally produced online magazine deals with all aspects of dancing and addresses all levels from the novice to the prima donna. Excellent site.	5	5	all
http://www.maui.net/~southsky/introto.html	**An Introduction to Skin Cancer.** This is a well-done introduction to this scourge of the '90s. Brilliant introduction provides information that both students and the general public should be aware of and includes what skin cancer is, how you can determine your personal risk, and precautions to take as well as diagnosis and a good glossary of terms. Excellent teacher and student site.	5	5+	all
http://www.per.ualberta.ca/biomechanics/	**Biomechanics Worldwide.** This is a very detailed and exhaustive collection of material on this subject. Everything you could ever imagine is here. This is for the very keen student doing research or the teacher looking to extend his or her own knowledge or prepare for senior classes.	4	5	6–12
http://k2.kirtland.cc.mi.us/~balbachl/fitness.htm	**Train the Smart Way: Health & Fitness Home Page.** Some excellent material for teachers answers some of the more common questions students ask. How can I burn more fat? Increase metabolism? Improve conditioning for sports? Lighthearted but with good content, this page is very worthwhile.	4	5	4–12
http://www.swimnews.com/	***SwimNews* Online.** This is the most trafficked swim site on the net, and it certainly offers a lot. You may need to register to get all the details, but a lot of free stuff is available, too.	5	4	all
http://www.noah.cuny.edu:8080/nutrition/nutrition.html	**Ask Noah About: Nutrition.** This is the complete information stack on nutrition. Lots of information here on vitamins, supplements, fiber, cholesterol, and 10 tips for good eating. There is also a section that deals with nutrition and disease and an article all about stopping the aging process using antioxidants (check your margarine container for more details). A good general site for research information.	4	5+	all
http://www-personal.umd.umich.edu/~jobrown/fire.html	**A Fire Safety Website.** All students need instruction on fire safety, and they need it often. Use this web site to increase awareness of the potential of fires through a different communication vehicle. This site is very thorough with a lot of information. Students will need assistance to make sense of it all. An excellent learning center here.	4	5+	all
http://www.nal.usda.gov:8001/py/pmap.htm	**The Food Guide Pyramid.** This good graphic site outlines the essential balance of food types one needs to eat each day. The site lends itself well to a research center or learning center for grades K–8.	4	5	K–8
http://www.pta.org/commonsense/	**Common Sense: Strategies for Raising Alcohol- & Drug-Free Children.** This site provides an excellent set of resources and a mission that very few can argue with. Drug and alcohol abuse by teens is developing into a major school issue, but finding effective preventive strategies is not easy. This site presents a straightforward and appealing set of strategies for teachers, parents, and students.	5	5+	4–12
http://www.cdc.gov/nccdphp/dash/	**DASH: Invest In Our Youth.** The DASH (Division of Adolescent and School Health) program's target is to encourage adults to see youth as an investment. Their mental, spiritual, and physical health must be ensured if our community is to survive. The site works through the problem and provides some strategies and some resources. Good material.	5	5	8–12

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URL	Comments	presentation	content	grade level
http://funrsc.fairfield.edu/~jfleitas/contents.html	**Band-aides & Blackboards.** What happens when you have a student in your classroom with a chronic illness? How do you prepare the child and the classmates? This excellent site deals with the issue by presenting two sites, one for the children themselves and one for the teacher. This is the first stop for good advice, ideas, and assurance when kids in your class become chronically ill.	5	5+	all
http://www.cs.brown.edu/people/lsh/smoking.html	**Smoking From All Sides.** Whom to believe? This site attempts to provide a set of links that shows both sides of the debate, but as the writer points out, "The anti smoking portion seems to be overwhelmingly more prevalent . . . ." Have students collate information and present a balanced summary, then have a class debate on the topic.	4	5	4–12
http://www.ed.gov/offices/OESE/ACTGUID/index.html	**Creating Safe and Drug Free Schools: An Action Guide.** Print this document and use it to promote staff room discussion on this subject. There is excellent background information as well as action steps school communities can take to develop safe environments for our students. Not all the answers are here, but very good material will start the discussion process.	4	5+	all
http://web.dbtech.net/~mray/coach.htm	**Coaching Football Online.** This is a list site plus. It has links to all the sites that can assist a coach, including famous plays, players, and coaching techniques as well as software, jobs, books, and magazines. Excellent collection of information.	4	5	all
http://www.foodallergy.org/	**The Food Allergy Network.** Food allergies were almost unheard of 10 years ago, now every student in the class has them. Plenty of material here including a very good section on Fact & Fiction. Other areas include a newsletter, product alerts, and an information section.	4	5	all
http://www.itdc.sbcss.k12.ca.us/curriculum/tobacco.html	**The Real Scoop on Tobacco.** In this excellent introduction to this topic, the student visiting this site has been hired by the parents of Icabod, a grade 6 student, who they suspect is smoking. The challenge is to create a plan to encourage Icabod to give the habit up. Go through a series of processes to become an expert on the subject, create an ad or visual message, write to the local tobacco company, then finally get Icabod's attention through a memorable message by using a medium he will relate to.	4	5+	4–10
http://www.geocities.com/Colosseum/Loge/3775/	**How to Coach Tee Ball Without Going Insane.** Rob Doss has a great site with good information on the game itself as well as hints and advice about managing and coaching. Excellent, in-depth information. The advice is really quite generic to all sports and is good material for all PE teachers.	5	4	all
http://vm.cfsan.fda.gov/~mow/intro.html	**The "Bad Bug Book": Foodborne pathogenic microorganisms and natural toxins handbook.** This very comprehensive information comes from the Food and Drug Administration and is an excellent resource.	4	5	9–12
http://www.colgate.com/Kids-world/	**Dr. Rabbit's No Cavities Clubhouse.** Colgate has put together a site to support the good care of teeth. Some very good activities encouraging students in grades K–3 to take care of their teeth include connect the dots, posters to print and color, fun facts, and art work.	5	4	K–3
http://www.tns.lcs.mit.edu/cgi-bin/sports	**World Wide Web of Sports.** This massive site from MIT discusses every sport you could possibly imagine and many that you couldn't. The best approach is to customize the site so it becomes manageable. Use the help text at the top, and set it up for individual searches or for particular units of work you are doing with students. Not a pretty page but volumes of info.	3	5+	all

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

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http://www.909shot.com/	**National Vaccine Information Center.** With schools often the locale for mass immunizations and with all the discussion on whether vaccinations are necessary, schools need to be aware of the issues. This is one side of the discussion. Good, well-presented information, but it needs to be balanced with information from the other side of the coin.	4	5	all
http://www.wce.ac.nz/cancer/	**Lifestyle Cancer Information.** This is an excellent, information-rich site for those investigating the links between our lifestyles and the onset of cancer. Three areas are investigated: Lifestyle and the Sun, Lifestyle Smokefree, and Lifestyle and Nutrition. In looking at the relationship between our lifestyle and the sun, more than 20 issues are explored in detail ranging from "Developing a shady school policy" to "Sunbeds and sunlamps."	4	5+	all
http://www.teachhealth.com/	**The Medical Basis of Stress, Depression, Anxiety, Sleep Problems, and Drug Use.** This is an easy-to-read introduction on these issues. Presented very well for the classroom, the information is balanced. The author has given permission for this to be reproduced for classroom use. Please read the disclaimer at the bottom of the page.	4	5	6–12
http://www.diabetes.com/index.shtml	**Diabetes.com.** This site is well written and deals with the many facets of diabetes. This is a great site, especially if students in the class have diabetes. Sift through the copious amounts of information; the Kool Kids section is a great place to start. Very good.	5	5+	all
http://www.cdc.gov/nchstp/hiv_aids/dhap.htm	**HIV/AIDS Prevention.** As with any site of this nature, please view it yourself first. It is factual and up to date with the emphasis on the disease and not the lifestyles that can assist in disease transmission. Some useful slides and graphics are available, but please ensure these fit within your school policy statements and are used with parental knowledge.	5	5	6–12
http://www.nsmi.org.uk/main.html	**The National Sports Medicine Institute of the UK.** This excellent site provides information on training, nutrition, and physiology for various sports including triathlon, rowing, tennis, gymnastics, hockey, and rugby. Very comprehensive information.	4	5	all
http://www.demon.co.uk/mindtool/page11.html	**Mind Tools: Sports Psychology.** This topic is excellently dealt with here. Plenty of information and links to other support sites. The first section on goal setting is worth exposing all students to. The section on practicing in your mind is well done, and the work presented on concentration is very comprehensive. All teachers of senior students should incorporate these aspects into their courses.	4	5+	6–12
http://www.fitnesslink.com/	**FitnessLink.** This great daily news site covers all aspects of fitness. The site suggests links, provides articles that deal with mind and body fitness, and has a good nutrition zone as well as fitness programs students can follow. There are also exercises, suggestions for healthier lifestyles, and a professional center dealing with research.	5	5	all
http://www.cdc.gov/ncidod/hip/abc/abc.htm	**The ABCs of Safe and Healthy Child Care.** This online handbook discusses issues related to the health of children in child-care environments. Sections cover how disease spreads in child-care institutions, children with special needs, emergency procedures, nutrition, first aid, reporting requirements, fire safety, and much more.	5	5+	K–8
http://www.usdoj.gov/dea/pubs/straight/cover.htm	***Get It Straight: The Facts About Drugs.*** This very informative online book from the Drug Enforcement Administration is very comprehensive, and its streetwise appeal will make it very useful in the classroom. The book provides a huge amount of information on the various drugs, their effects, and how they are used. Excellent.	5	5+	all

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

URL	Comments	presentation	content	grade level
http://www.tc.umn.edu/nlhome/g032/arnt0008/kara/	**Cyber-Active: Physical Education Resource.** There is some excellent material here for special-needs students as well as an excellent Activity Database and a great article on using the Internet in the PE class.	4	5	all
http://www.amhrt.org/Health/Lifestyle/Youth/index.html	**HeartPower:** A great site dealing with integrating activities that promote adequate nutrition and activity and smoke-free living along with some very good presentations on how the heart works. Good, fun approach that students will find very appealing.	5	5	K–6
http://www.sportsci.org/news/news9707/news9707.html	**Sportscience** offers a monthly newsletter, *Sportscience News*, for the discipline, which contains excellent information and appears to be right up with the play. If this is your field and you want to update, the information here is useful.	4	4	6–12
http://commtechlab.msu.edu/CTLprojects/dlc-me/	**Digital Learning Center for Microbial Ecology.** Don't let the title put you off! The information here regarding microbes and health is excellent. Great sections such as The Microbe Zoo, Microbes in the News, and The Curious Microbe make excellent reading. The information is presented very well and is very contemporary. The material makes interesting reading at all levels of the curriculum. Fascinating stuff!	5	5+	all
http://www.nfl.com/	**The National Football League.** The official site with all the game reviews, scores, team profiles, and news stories. If students are looking at football as a career, this site will excite them further, but make sure you do some probability and risk analysis with them to go with the hype.	5	5+	all
http://trivia.tqn.com/msub9.htm	**Food Science & Nutrition: Nutrition & Metabolism.** Part of the Minnesota Department of Food Science & Nutrition course, this material is backup to lectures, but it makes an excellent resource for teachers of grade 8–12 students. Material deals with critical thinking, metabolism (general), enzyme regulation, fiber, lipids, homeostasis and disease, and much more.	4	5	8–12
http://www.fitlife.com/	**FitLife: An Electronic Resource of Fitness, Health Promotion, Wellness, and Lifestyle.** A good collection of materials dealing with an integrated approach to health. This is the direction that most PE and health and fitness curricula are heading, so this serves as an excellent resource integrating what have been traditionally separate areas of the curriculum.	4	5	all
http://www.kidshealth.org/index2.html	**KidsHealth.org.** Devoted to the health and well-being of children and teens, this site provides good tips as well as discussions of issues such as smoking, answers to such questions as why we have belly buttons, food and fitness information, surveys, and a good selection of essays by sick kids. Very good content.	4	5+	all
http://edie.cprost.sfu.ca:80/gcnet/	**Global ChildNet.** This site deals with the global issues surrounding child health. A lot of data and reports here deal with all aspects of child health in all communities.	5	4	all
http://www.cdc.gov/ncipc/bike/	**The Bike Hub: National Bike Safety Network.** This site has a huge amount of information for teachers and concerned parents about the safety issues surrounding children and bikes. Sections cover statistics, helmets, bike safety month, biomechanics, evaluation data, education programs, and much more. Essential topic for all ages.	5	5+	all
http://www.canoekayak.com/	***Canoe & Kayak* Magazine.** This excellent magazine is for river and ocean enthusiasts. Lots of articles, tips, and information on places to go. Good repair and maintenance articles and buying guides as well.	5	5	7–12

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

SkyLight Training and Publishing Inc.

URL	Comments	presentation	content	grade level
http://www-white.media.mit.edu/~intille/sports-technology.html	**Sports Technology.** This great site looks at where the leading edge in technology development meets the sports industry. The sports industry is very demanding and provides an excellent vehicle for technological development. This site deals principally with the application of computer technology to sport.	4	4	6–12
http://vearthquake.calstatela.edu/edesktop/WWW_Projects/Medical.html	**Student Projects: Medical Theme.** This rather uninspiring home page from California State University opens out into a sea of useful and well-presented information on a variety of health issues. Topics range from Alzheimer's disease to breast cancer, HIV, TB, and a host of other health concerns. What sets this site apart are the personal comments from people who have experienced these diseases.	4	5+	all
http://trivia.tqn.com/msub9.htm	**Food Trivia.** It's good for teachers to have some anecdotal information up their sleeves that sounds almost unbelievable. Here is the site for the health professional who wants to lighten the tenor of the classroom occasionally. Excellent series of obscure facts such as a 4.5-mile-long banana split or the largest restaurant in the world seats 5,000 and has a staff of 1,200 in Bangkok. Great material.	4	5	all
http://www.rockandgroove.com/main.html	**Rock and Groove.** No, not a music magazine but an Ezine devoted to rock climbing. With the popularity of indoor climbing walls, this sport is having a real renaissance. Excellent magazine, and it's great to see an active beginners' section as well as areas dealing with health, news, gear, and events.	5	5	4–12
http://www.nutribase.com/	**NutriBase: The Nutrition Data Base.** This great database has 27,000 food items and 3,400 menus from 70+ different restaurants. You can find out the fat, sugar, and salt content as well as any other nutrient you can think of in any fast food. This site is great for students to explore and record their daily intake of the various nutrients.	4	5+	all
http://www.biorap.org/br8contents.html	**Is It in Your Genes? Aging and Genetics.** Check out the research in this area. Can people potentially live forever? What are the implications for a world where life is extended and a greater percentage of elderly require support? This great site provides lots of information, including physical therapy career information, a word list, and BAG It, which stands for Be an observer, Ask questions, and Gather information. A teacher's guide supports the work as well as a reading list and additional material for those who want to probe deeper. Great site.	4	5+	8–12
http://www.biorap.org/br6contents.html	**The Challenge of Cancer.** Everyone knows someone who has died of cancer, and there is a huge worldwide push to find cures for the myriad different versions of this deadly disease. This site, another in the great series from BioRAP, presents a well-balanced investigation into the subject. Check out sections such as Career Rap on the epidemiologist, how to eat well to prevent cancer, and even cancer in your pets.	4	5+	4–12
http://www.gogirlmag.com/	***Go Girl! Magazine:* Sport & Fitness for Women.** A great site that encourages girls and women to become more active. It highlights various women who have excelled and also those whose lives have improved both physically and socially through their involvement in various sporting activities. Lots of information on health, nutrition, and fitness. Excellent material.	5	5	all
http://www.richmond.edu/~ed344/98/health/	**Health for Kids.** This is an excellent resource site for teachers seeking a good understanding of the health needs of children. Areas covered include dental health, exercise, healthy habits, nutrition, parts of the body, and the senses. This site is a great resource for a parents' information evening. Good commonsense information.	5	5+	all

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http://hsc.virginia.edu/cmc/tutorials/asthma/asthma1.html	**Asthma.** This condition affects students in all classes. Knowing how it affects them and what causes the condition can benefit the whole class as well as the student and the teacher. Treatment profiles are well established now, and in most cases, the asthma can be managed well if the student is encouraged.	4	4	all
http://whyfiles.news.wisc.edu/019olympic/index.html	**Sports Science: Sport Science meets the Olympics.** This excellent site investigates the interface between technology and sport and whether the technology and the science play a greater part than the athletes themselves. This aspect of sport is notorious, and the word "cheat" is never far away. The site asks what would happen if they held an Olympics without all that modern stuff? Good material in the Why Files.	5	5	K–10
http://www.ag.ohio-state.edu/~ohioline/hyg-fact/5000/5549.html	**Practical Facts about the Fat in Our Diets.** Fat, our number one enemy . . . or is it? Why do we need it, and what does our body do with it? This site adds some facts to the often oversold issue of fats in our diets. This site addresses the key issues and provides a much better basis than the dietary magazines so many students get their facts from.	4	4	4–12
http://www.cdc.gov/ncipc/bike/epidemio.htm	**Epidemiology of Bicycle Related Injuries.** If you need statistics to convince parents or students that students should wear helmets, come here. This site offers mortality rates, helmet effectiveness studies and statistics, traffic safety facts, and initiatives from the World Health Organization.	4	4	all
http://www.biorap.org/br5contents.html	**Here's Looking at You: Healthy Skin.** The complete unit of work here is aimed at students in grades 7–10 and offers students information and guides, a teacher's guide, and references. The section Looking Deeper is for those students who need a challenge. Excellent material is well presented.	5	5	7–10
http://www.cybertown.net/wi/syskos/bb/wwwboard/index.html	**Cybertown: Basketball Coaches Corner.** This site offers a mailing list and links to topics dealing with the coaching of basketball. This good service discusses and debates the issues of sports coaching and management and covers everything from fund-raising ideas to shooting tips and developing a team from scratch.	4	4	all
http://www-ct.sprintlink.co.za/~bellevue/javelin/tomtrain.html	**Tom Petranoff's Javelin Training Guide.** Not many teachers have a lot of expertise in the area of throwing the javelin without dislocating or straining the upper arm and lower back muscles. This site, by one of the world's greats, presents a training schedule for aspiring throwers and tips for getting maximum distance from the effort put in.	4	4	4–12

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Information Technology

URL	Comments	presentation	content	grade level
http://www.iste.org/	**International Society for Technology in Education.** This site offers guides to resources, ed tech news, and special interest groups, and some good material on distance learning applications. A good reference section cites some of the papers that examine the benefits of online education.	5	5+	all
http://www.voicenet.com/~cranmer/censorship.html	**Child Safety on the Internet.** This issue needs to be addressed with care and planning and policies put in place to ensure the Internet environment is as safe as possible. This excellent site addresses all the issues in this field and does it well. All schools need to look through this before letting kids anywhere near the Internet at school.	5	5+	all
http://www.gsn.org/cu/index.html	**CU-SeeMe Schools.** This software is fast becoming the established means for schools to communicate with each other via desktop video conferencing. With the cost of this technology well within the reach of most schools, the increase in traffic is exponential. To download the software, see some demos, or find out what events are taking place, this site is well worth a visit. You can also list your school and receive invitations to events.	5	5	all
http://www.vocaltec.com	**VocalTec using the computer as a phone.** With the online communication trend, VocalTec has been the leader in providing software that lets your computer act as a phone. The software is very cheap and easy to use. They offer duplex (both people can talk at once) systems. Not free but imagine international phone calls for $1.20 an hour. For that, you can put up with a bit of static. For free software, check out Voxware at http://www.voxware.com .	4	5+	all
http://www.cue.org/	**Computer Using Educators.** This newsletter goes out to more than 10,000 teachers and contains great exemplars, ideas, and articles dealing with technological issues.	4	5	all
http://www.ed.gov/Technology/Futures/overview.html	**The Future of Networking Technologies for Learning**. All teachers working in this area must visit this site and print and read the material. This series of reports written for the U.S. government to point the way of the future is excellently written, and they try and do some crystal ball gazing to see what the future holds. Once you have viewed the abstracts, set some time aside to read the full document(s).	4	5+	all
http://www.htmlgoodies.com/	**HTML Goodies!** This is the most comprehensive site for beginners in the teachers@work directory. A series of tutorials for either yourself or the class as well as 450 Java applets are available. More than 400 images are available to add some spice to your site as well as plenty to buy.	4	4	4-12
http://www.coe.uh.edu/~sledet/technology.html	**Technology in the Classroom.** This excellent essay deals with the "whys" of using technology in the classroom. You probably do not need convincing, but many do, and this essay provides an excellent rationale for the introduction and implementation of technologies into the school environment.	4	5	all

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http://www.wpine.com/Products/CU-SeeMe/index.html	**Video conferencing over the Internet**. This will be all the rage in the near future in schools, and this is the software leading the charge. Download the demo and have a look. The software is not expensive and should become fairly standard in the near future, especially with the visual language strand of the English curriculum receiving so much attention.	4	5+	4–12
http://java.sun.com	**The Source for Java Technology.** All you wanted to know about this latest addition to the Net. There are applets galore here to download and use as well as advice on how to use them.	5	5	all
http://www.smh.com.au	***The Sydney Morning Herald* computer section.** The Australians do it well here, and this daily update is well worth a read. Easy-read material that is not too technical allows teachers a chance to read something without reaching for next year's technical dictionary every two minutes.	5	5	all
http://www.info.apple.com/	**Apple home page.** This is the Apple hype page, and, no, Apple is not going out of business. The site offers all the technical support and up-to-date information on hardware and software. Well put together and easy to follow.	5	5	all
http://www.fishnet.net/~gini/cool/	**Cool Graphics on the Web.** Get 250,000 free graphics! This site provides links to sites that provide the graphics, but it is a great place to start looking for all those graphics that you need for those web pages, reports, and units of work.	4	5	all
http://www.ac.wwu.edu/~kenr/TCsite/contents.html	**The [Information] Technology Coordinator's Web Site.** Excellent support material for teachers who find themselves suddenly in this role. Good planning material as well as sections on integration, the roles of the library, administrative computing, networking, and information sources all in an easy-to-read format.	4	5	all
http://www.nctp.com/	**National Center for Technology Planning.** Planning—often the missing term when it comes to schools and IT and TT (telecommunications technology) development. This site is a great resource for all schools. The material provides excellent information to school administrators on successful development of technologically sustainable information systems. In particular, do not pass the Technology-Based Needs Assessment Instrument and the Guidebook for Planning Acrobat Documents.	5	5+	all
http://www.learnthenet.com/english/main.htm	**Learn the Net.** "Knowledge when you need it" may not be an educationally sound mission, but the site can help teachers access data and information. Good page offers ideas for introducing students to the web and information on search tools, conferencing, web publishing, news groups, and a lot more all in nontechnical language with good developmental pathways.	5	5	all
http://www.ncrtec.org/picture.htm	**The Amazing Picture Machine.** When you create web pages, the "picture that says a thousand words" can be hard to find. This site is full of pictures for you to use. There are copyright restrictions, so read that section carefully. A search engine helps find what you need.	5	5	all
http://www.intel.com/cpc/learn/learnbasics/index.htm	**Learn the Basics.** This is a good site for both teachers and students to learn the basic principles behind computer set-up and use as well as how to download material from the Net. The site introduces ideas gradually, using simple language. Learn Internet jargon, and check out the good selection of tips and hints. A good section eplains how to get your web site up and running.	5	5	all

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http://www.svi.org/projects/SCHOOLS/GUIDELINES/index.html	**Technical Guidelines for Schools.** These guidelines are for schools looking to develop a school-wide network and wanting background on what is available and at what cost. The guidelines cover issues of security, networking, multimedia, and broadband networks. Some very good information here deals with the here and now without much crystal ball gazing.	4	5	all
http://www.macromedia.com/shockzone/	Macromedia Shockzone. This is an excellent example of the potential of this emerging software: **Shockwave** is an excellent tool, and this site is an example of what one can achieve using plug-ins.	5	5	all
http://www.sun.com	**Sun Microsystems home page.** Java lives here so expect lots of applets and information. If you are looking for high-end material, this is the place to shop (along with Silicon Graphics). *SunWorld* magazine is also worth looking at.	5	5	9–12
http://edweb.gsn.org/	**EdWeb Exploring Technology and School Reform**. Good material here from an interactive HTML course with a debate over the information highway and an excellent section looking at just what schools are doing with computers in the classroom. A section called WWWEDU (pronounced We do) is a discussion group looking at the place of the world wide web in education.	5	5	9–12
http://www.microsoft.com/	**Microsoft home page.** If you need information on any of the software out there, this is a good place to visit. Patches (small upgrades) are offered free, or you can download some free beta trial software. This site is worth visiting once a month just to keep a finger on the pulse of software.	4	5	all
http://mustang.coled.umn.edu/	**Mustang: A Web Cruising Vehicle.** In this great concept introducing students to the web, you get a map, some tools, and a vehicle. This page is a tool for integrating the Internet into any curriculum. A great idea.	4	5	all
http://teleeducation.nb.ca/it/module1/	**Web Publishing.** This is an excellent module of work for all those wanting an introduction to the Internet and good instruction on how to publish information on the Internet. It has four sections: Introduction to the Internet, The World Wide Web, Publishing on the Web, and Online Ethics. Lessons are very well set out with exercises and feedback. Excellent for both teachers and students.	4	5+	all
http://mamamedia.com/	**MaMaMedia: Making Your Own Web Page.** Often the web editors are too complex and have too many options for use in the classroom with younger students. This site offers a good alternative for the classroom teacher. The site uses a tool called Presto that allows quick and relatively easy construction of sites using templates, in-house pictures, and so on. Take time to work through the concept first.	4	4	K–10
http://www.unm.edu/~jeffryes/its1.html	**Integrating Technology in Schools.** This very up-to-date and useful site proffers ideas for using the Internet in the classroom. There are examples, supporting links, and the experiences of those who have been at this for a while. There is also a list of electronic journals online, a good how-to-publish section, and some Internet introduction books and pages.	4	5	all
http://www.electronic-school.com/	***Electronic School:* The School Technology Authority.** This journal contains must-read material, and the entire journal is online for you to read at your leisure. There are the usual journal themes and articles here as well as conference lists, news, and technology information.	5	5+	all

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http://www.safekids.com/child_safety.htm	**Child Safety on the Information Superhighway.** This is a very comprehensive look at this issue with good advice for teachers looking to let students loose into virtual space. Much of it is common sense, but it is good to see that common sense is reasonably common. Some of this would be good to cut and paste for parent information.	4	5	all
http://www.si.edu/resource/tours/comphist/computer.htm	**Smithsonian Computer History page.** If you teach the history of computers, this page is a must-see, and it also provides some anecdotal information to throw at students every now and then that leads them to think teachers know more than students do about some subjects at least.	4	5	all
http://web66.coled.umn.edu/Cookbook/win95/Contents.html	**Windows95 Internet Server Cookbook.** This very useful tool assists both teachers and students in creating their own web pages. Great concept behind the teaching methodology with Internet kitchen cookbook and utensils used to create a great page.	4	5	6–12
http://www.macromedia.com	**Macromedia Home Page**. Headlines and product information. If you are looking at multimedia production, this could be a good site to visit as these guys are the experts.	5	4	all
http://www.infotech.co.nz/	***Infotech Weekly*** online. One of the best newspapers on the Net. *Infotech* is very informative. (Even though it is very business oriented, so is the technology curriculum.) Look through back issues, or just skim through and catch up with the latest in the telecommunications industry.	5	4	all
http://www.sgi.com/homepage.html	**The Silicon Graphics home page**. If you are into high speed computing, this is the in-vogue site for you. A good site to get a peek at the changing face of this technology as well as some great web innovations.	5	4	9–12
http://nilesonline.com/data/	**Finding Data on the Internet.** This fantastic site outlines simply some of the golden rules for finding information on the Internet. Well presented, it is a must-see site for getting going on the Internet.	4	5+	all
http://www.dpi.state.nc.us/curriculum/Computer.skills/index.html	**K–12 Computer/Technology Skills.** This site is the home to a standard course of study in K–12 computer/technology skills. The course is divided into different grade levels starting with kindergarten and going through senior high and college level material. Currently in draft format, the material still needs some review but is a very useful guide to ideas for the K–12 computer teacher.	4	5	all
http://numa.niti.org/enc/contents.htm	**Searching the Web.** If you're looking for online course material, this is a good place to start. The site is divided into three categories of searching technique, depending on the experience of the user.	4	5	all
http://fromnowon.org/	***From Now On:* The Education Technology Journal**. This journal is excellent for keeping on top of this dynamically changing landscape. Everything from Acceptable Use Policies to technology planning, networks, and some great articles. "Research and Information Problem Solving" is an article everyone should read. Also check out "The Post Modem School in the New Information Landscape."	4	5	all

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

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http://home.netscape.com	**Netscape Communications home page**. You probably end up here every day without even asking, but just in case you don't, here is where to find it. You need to read this page every now and then and keep your surf tools honed. There are plenty of giveaways and some great information regarding trends and technical information that is . . . technical.	4	5+	all
http://browserwatch.internet.com/plug-in.html	**BrowserWatch: Plug-in Plaza.** It must be one of the most annoying features of the Internet. You are halfway through downloading something and you are asked to stop, download a plug-in, reboot, and start your download all over again. You can avoid this by coming here and downloading all the major plug-ins and filing them appropriately. Great site and easy to follow instructions.	4	5	all
http://www.yahooligans.com/	**Yahooligans!** This site is set up for kids to explore and seems free of any problems. Titles are self-explanatory, and the comics section is good, too! The homework answers section may disappoint some, however.	5	4	all
http://www.schoolpc.acp.com.au/	**School PC Australia.** Part of Australian PC User, this excellent site lists sites to visit and articles that deal with using and adapting PCs for school use as well as technical articles (not too technical), Internet issues, and software reviews. Good site.	5	4	all
http://www.thejournal.com/	***T.H.E. Journal.*** T.H.E. stands for Technological Horizons in Education, and this excellent magazine has articles dealing with all aspects of technology in use by schools. Well set up and very professional, this magazine explores issues surrounding administration and management systems, new approaches to technological use, assessment issues, and the Internet in education.	5	5	all
http://www.wired.com/news/download/pointcast.html	**PointCast Business Network.** Here is some push technology for you. If you would like daily news items on topics that interest you and you don't mind a bit of advertising at the same time, you can download this service. When you have a bit of a break and your screensaver would normally come on, lo and behold, your news service comes on instead. It is called push technology as you do not have to pull it down each time you want it.	4	5	all
http://www.4teachers.org/home/	**WWW 4 Teachers.** This excellent free subscription deals with issues pertaining to the use of the Internet and other electronic information tools by teachers. There are some excellent lessons here as well as a very useful tool called Premier Tracks that one can use to create web lessons very simply. Good punchy articles, reader surveys (cost of IT/student), and some good profiles of teachers at the leading edge. Well worth a visit.	4	5	all
http://www.ncsu.edu/meridian/	***Meridian:* A Middle School Computer Technologies Journal.** This excellent journal has good coverage of all the major issues and technologies related to schools. This is a good way to keep up with all the latest opportunities without having to read through all the technical journals.	5	4	4-9
http://www.cnet.com/Content/Features/Techno/Networks/?dd	**20 Questions: How the Net Works.** This is a good site for obtaining background information for presentations to staff or students on what the Net is, how it works, and what it can be used for. The site also describes an intranet, how e-mail works, how to maximize safety on the web, how to use the Net as a phone service, how to make a web page, and how search engines work.	4	5	all

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AltaVista (general)	http://www.altavista.com/	**Yahooligans** (K–12 only)	http://www.yahooligans.com/
Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

URL	Comments	presentation	content	grade level
http://www.ithaca.edu/Library/Training/hott.html	**ICYouSee: T is for Thinking!** What you see on the web may not always be what it claims. Critical thinking is essential to assess a credible web site. This site offers five suggestions to ensure that you and your students can discern reputable and useful sites. A good and succinct set of guidelines.	5	5+	all
http://www.ithaca.edu/Library/Training/ICYouSee.html	**ICYouSee: Guide to the World Wide Web.** Teachers and studets can use this great set of web pages to assist in their understanding of what the web is, how it works, and how to get the best from it. The site answers seven fundamental questions concerning the web and deals with them authoritatively and succinctly.	5	5+	all
http://www.ajkids.com/	**Ask Jeeves for Kids.** Ask Jeeves has been around for a while, but the one problem with students using it is the occasional inappropriate qualifying question it comes back with. Ask Jeeves for Kids allows students to type in a question such as "What is the moon made of?" and receive qualifying questions then a list of sites for them to investigate. Not the most accurate search engine in the world on specifics, but it's great for themes, and no Boolean search skills are required.	5+	5	all
http://www.fromnowon.org/fnoindex.html	**From Now On Subject Index.** This site offers a great selection of well-written articles on all topics associated with the introduction of technologies into the classroom. Every topic is here from Internet Use Policies, Libraries of the Future, and Networking & Connectivity to Research, Technology Planning, and Web Site Development.	5	5+	all
http://www.gsn.org/web/index.html	**Harnessing the Power of the Web.** The Global SchoolNet has put together an excellent tutorial on how to make the most of the Internet in the school. An excellent introduction, it would be a great way to introduce staff with little previous experience to the web. Sections deal with the relationship between the web and school reform, sample student web projects, and advice on using Net tools.	5	5	all
http://www.geocities.com/~webwinds/classes/powerpt.htm	**PowerPoint Links.** PowerPoint software is used by many schools and teachers around the world to present information directly or to produce OHTs. This site opens up a whole new range of opportunities for its use in addition to linking to sites that explain how to maximize the potential of this program. There are some great online courses and lessons you can set up on the school intranet for staff to take advantage of.	4	5	all

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

teachers@work http://www.teachers-work.com

Language Arts

URL	Comments	presentation	content	grade level
http://speeches.com/	**David Slack: Speech Writing.** At this quite remarkable site, you can have speeches written for you by using a standard speech and inserting information particular to your speech. There are also links to great speeches of historic or global importance, those dealing with technology, and much more. Good oral language site that encourages speech making.	5	5+	all
http://www.deathclock.com/thunder/	**What the Thunder Said: T. S. Eliot.** This is an excellent collection of the works, poems, and essays of T. S. Eliot. Use this great site as a base for homework exercises or for an in-class learning center.	5	5+	9–12
http://english-www.hss.cmu.edu/filmtv/	**The Virtual Library's Film and Television Studies.** Explore some of the good links cited here. They vary considerably, so take a look before directing students here. This is a good site to find film or TV support material for the classroom.	4	5+	all
http://english-www.hss.cmu.edu/poetry/	**The CMU Poetry Index of Canonical Verse.** The poetry site of the virtual library. Plenty of poets online here from Homer (not Simpson) to Eliot. Great resource if the library is not quite up to it.	4	5+	all
http://www.yahoo.com/News/Newspapers/K_12/	These are a **range of newspapers** written by students mostly from U.S. cities but with a few from Japan, Australia, and Europe. The papers range from very good to indifferent, but some have good ideas against which students can judge their efforts.	4	5+	all
http://www.inkspot.com/young/	**Resources for Young Writers.** This is great material for teachers to sift through and adapt and for students to use at their leisure. There are plenty of tips for writers and screenwriters as well as lists of publications willing to publish students' work. This is an expanding role of the Internet, and one teachers need to make more use of.	4	5+	all
http://the-tech.mit.edu/Shakespeare/works.html	It had to be here. **The Complete Works of William Shakespeare.** The full unabridged works divided into Comedy, History, Tragedy, and Poetry. There is also a search engine, chronologic and alphabetic listings, familiar quotations, a discussion area, and links to other sites dealing with the Bard.	4	5+	9–12
http://promo.net/pg/	**Project Gutenberg: Fine Literature Digitally Republished.** This huge project is dedicated to making books of all types available to people throughout the world.	3	5+	all
http://www.infoshare.ca/csm/index.htm	***CyberSchool Magazine.*** This is an excellent magazine and a great vehicle to encourage kids to get into contemporary reading. Great use of visual language.	5+	5	all
http://www.harperchildrens.com/index.htm	**The Big Busy House: HarperCollins Publishers online.** This great site for all students has plenty of ideas and competitions that encourage writing and reading. Great activities use other web sites as well. The section How a Book Is Made gives kids insight to how a book is put together. It is really quite interesting!	5	5	all
http://www.poetscorner.org/	**Poets' Corner.** This is a collection of links to web sites of poets. A good selection of poetry; the site also offers short reviews of each poetry style. Have students select two poets and contrast their styles.	4	4	8–12

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http://www.firstcut.com/	***firstcut* is an exciting online magazine and meeting place for teenagers.** Presented very attractively for the target market, *firstcut* contains articles on topics of teenage interest as well as news and comments on music, fashion, entertainment, and more.	5	5	9-12
http://daemon.ilt.columbia.edu/projects/dante/	**Digital Dante.** This is an excellent site for those Dante fans out there.	5	5	9-12
http://www.link.cs.cmu.edu/dougb/rhyme-doc.html	**The Semantic Rhyming Dictionary.** For poetry work, this is a great site. Submit your term and receive a list of rhyming terms. This is a very comprehensive service; teachers need to read the accompanying text to gain maximum value. This site was used recently to provide each student with 10 rhyming words, then students were given 10 minutes to use the words to make a nonsense poem. Great for the less motivated poetry students.	4	5+	all
http://www.quill.net/	**The Quill Society.** The Quill Society is a fellowship of bright young writers with vivid imaginations. An excellent members service, the site offers a library of stories and an academy that reviews work by young writers. The more adventurous writers can join up and receive some good advice and encouragement.	5	5	4-12
http://www.abc.net.au/	**Australian Broadcasting Corporation (ABC).** The great Australian communicator. This is a good site for investigating the various forms of mass media communication. Well set up and lots of information on almost every topic imaginable.	5	5	4-12
http://www.indigo.ie/local/mikero/	**A Tale from the Internet.** Mike Rofone is the main character in this well-presented interactive tale. Hypertext links are used to add interesting information without necessarily detracting from the pace of the story. A good example for students of how to use hypertext to create intrigue and further interest in a story.	5	5	4-12
http://owl.english.purdue.edu/	**Purdue University Online Writing Lab.** This good set up allows students to use an extensive database to help them improve their writing skills. Commas, resumes, formatting, nonsexist language, and more are dealt with here.	4	5	all
http://www.acs.ucalgary.ca/~dkbrown/general.html	**The Children's Literature Web page.** This site lists the international top 10 books for kids as well as reading associations, a good collection of online children's classics, and contemporary texts. Check out the Resources for Teachers section of this site for some good links.	4	5	all
http://www.theatlantic.com/atlantic/atlweb/poetry/poetpage.htm	**Poetry Pages.** This *Atlantic Monthly* site contains poetry both classic and contemporary. This site has audio clips, multimedia features, and articles looking at the changing nature and styles of poetry.	5	5	all
http://sti.larc.nasa.gov/html/Chapt3/Chapt3-TOC.html	The **Punctuation** chapter of the Grammar, Punctuation, and Capitalization site. Students are forever unsure whether they should use a comma, semicolon, or period. This is a very thorough dissertation on the correct use of these as well as brackets, apostrophes, parentheses, question marks, and many more tools of the trade.	4	5	all
http://www2.actden.com/writ_den/index.htm	**The Writing Den.** This well-constructed site has great teacher and student resources, a word of the day, some very good tips on writing, and a whole range of writing topics, which would make good topic suggestions for oral and visual language work. The writing topic featured each month is excellent. Mostly for older students, this site is very well done.	5	5	4-12

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http://town.hall.org/Archives/radio/IMS/HarperAudio/	Fancy **listening to the works of authors** such as Anne Frank, Robert Frost, Edgar Allan Poe, or William Shakespeare? You can from this site through audio recordings. This site can also be used as an oral comprehension site with the teacher producing comprehension exercises to go with the readings.	4	5	5
http://www.scils.rutgers.edu/special/kay/childlit.html	**Vandergrift's Children's Literature page.** Understanding literary characters is a pathway to understanding self, and this site is an excellent look into the elements of good books for children. A good site for teachers to look into.	4	5	all
http://classics.mit.edu/	**The Internet Classics Archive.** This is a searchable collection of more than 400 classical Greek and Roman texts (with some Chinese and Persian texts) translated for your reading pleasure. The classical studies people and any literature purist will thoroughly enjoy this site.	4	5	9-12
http://english-www.hss.cmu.edu/filmtv/	One of the many categories from the English Server, this site on **film and television studies** is excelllent. Any class or teacher looking at visual language, drama, or television studies will find this site very useful with its huge range of articles, resources, and ideas.	4	5	9-12
http://www.columbia.edu/acis/bartleby/	**Project Bartleby Archive.** All the classic poets and texts are here. The material is well presented, and the list of books grows each day.	4	5	9-12
http://etext.lib.virginia.edu/britpo.html	**British Poetry Archive.** British poetry from 1780 to 1910—Milton, Wilde, Carroll, Wordsworth, Keats, and others. Thorough but not extensive, this site is well laid out for ease of use.	4	5	9-12
http://darkwing.uoregon.edu/~leslieob/CALL9.html	**Computers and Language Learning Course.** In this program, Internet sites are selected, and students must answer questions about the site. A different theme each month. Some good ideas here.	4	5	9-12
http://www.m-w.com/info/w3entries.htm	**Wester's Dictionary of 150-Year-Old Words.** So many words in our vocabulary are new, you wonder how many are more than 150 years old. This site provides the quite surprising answer. Good trivia material, but the site also provides some excellent anecdotal material for the classroom.	4	4	all
http://www.stonesoup.com/	***Stone Soup*** is an international magazine written and illustrated by kids aged 8–13 years. This is a very good magazine and worth subscribing to.	4	5	2-8
http://www.cs.virginia.edu/~robins/quotes.html	**Good Quotes from Famous People.** Hundreds of famous quotes. Excellent resource for all writers. One quote from Thomas Jefferson—"I find that the harder I work, the more luck I seem to have"—was recently said to have been authored by Jack Nicklaus.	4	5	all
http://darsie.ucdavis.edu/tales/	**Tales of Wonder: Folk and Fairy Tales from Around the World.** Having students make up their own fairy tales or folk tales can be a great language exercise. Have them invent a culture and write their own folk tales. This site has folk tales from around the world and lots of them. A great starting point.	4	5	all
http://myhero.com/	**Heroes** is a common theme for language projects, and this site has some great material on how everyday people became heroes. Good stories well presented in large type. Print and use in the classroom.	5	4	K-8

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

URL	Comments	presentation	content	grade level
http://www.cs.bilkent.edu.tr/~david/derya/ywc.html	**The Young Writers Club.** A great international club for keen writers. Get your work published (the children not you!), take part in activities, and complete the incomplete stories (great for reluctant writers) and research projects. You can contribute in Turkish or French if English is not your strong point.	4	5	K–3
http://www.itp.tsoa.nyu.edu/~student/mags/kinderpress/index.html	**Kinderpress.** This student publishing site is a good site for younger students to use as a publishing tool. Submit your students' work here, and it may be published. An alternative if you do not have your own web site.	4	5	K–3
http://www.pemberley.com/janeinfo/janeinfo.html	**Jane Austen Information page.** With the rise in popularity of Austen, students might be keen to look at more of her works. They are all available from this site. Her ability to record the triviality, irony, and humor of the times while she sews a thread of the serious at the same time is legendary.	3	5	9–12
http://www.emerson.edu/ploughshares/	***Ploughshares:* the Literary Journal.** This site provides a reasonable amount of content from this excellent journal of fiction and poetry that is released three times a year.	5	4	9–12
http://www.falconedlink.com/falcon/	**Another Shakespeare** resource but a very well-produced one. Check this out for effects and presentation. If you are studying or just enjoying *Hamlet* or *Macbeth*, this is a good site to visit.	5	4	9–12
http://wheel.dcn.davis.ca.us/~aeoltcap/jeanc_home.html	This is the home of the **Journalism Education Association of Northern California.** It is a great general site with good links to other useful sites and a list of resources to access, and it serves as a good link to the teaching of journalism globally.	5	4	9–12
http://www.5tigers.org/ta3/text/a1.htm	**Save the Tiger!** Debate and development of oral communication skills is essential for all students. This site provides an unorthodox context for an excellent debate. Use the tiger handbook to develop an argument, then follow the zookeeper and Mr. Wilson through their respective points.	5	4	4–12
http://sashimi.wwa.com/~jayhawk/librarys.html	**Sites of Interest to Librarians.** This comprehensive set of links acts as guides to subject lists and information science material as well as information on applications of the Internet and other information technologies.	4	5	all
http://www.ucc.ie/info/net/acronyms/acro.html	**Acronym and Abbreviation Server.** Have more than 7 million people really been here? This is a good service, but 7 million people! Apparently there are lots of reasons people would come here.	4	5	all
http://english-server.hss.cmu.edu/	**The English Server.** Based at Carnegie Mellon University, this is the largest compilation of material for English teachers with 20,000 works in more than 30 different categories, including Film and Television, Languages, Drama, and Multimedia.	4	5	all
http://crayon.net/	**Crayon: CReAte Your Own Newspaper.** This is an excellent tool for all levels. The site provides tools and samples that assist students in the creation of their own newspaper. It offers a range of sources for finding information, and students can see their own newspaper published. This excellent use of the Internet can be adapted for use by grade 2–3 students upward.	5	4	2–12
http://www.leonardsworlds.com/camera.html	**Leonard's "Cam World."** What is this site doing in the language section? Great visual language of course! It really is very good with 200 camera sites and more than 1,500 cameras set up for you to look at everything from beaches to street corners.	4	5	all

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http://www.littleplanet.com/	**The Little Planet Times.** Print this newspaper for kids by kids, and use it in the classroom as reading material or as sample newspaper material. It contains letters to the editor, a creative corner, entertainment news, and more. Suitable for K–3 mostly.	5	4	K–3
http://english.ttu.edu/kairos/1.3/toc.html	***Kairos:* Electro-Pedagogies.** Snappy title but this journal is dedicated to the issues of writing and its increasing variety of electronic formats. It is a scholarly journal but very well presented, and it has good background information for English teachers investigating the electronic leading edge in their field.	5	4	all
http://c.gp.cs.cmu.edu:5103/prog/webster	**Webster's dictionary.** Enter the word and how you think it is spelled and receive the correct spelling and the definition. Read the instructions first; they will help in your search.	4	4	all
http://www.wordsmith.org/anagram/hof.html	**Anagram Hall of Fame.** Whether you find anagrams frustrating or you love them, these are excellent: The Morse Code = Here Come Dots, or Conversation = Voices Rant On, or Astronomers = No More Stars. Plenty more here at this site.	4	4	all
http://cmp1.ucr.edu/exhibitions/cmp_ed_prog.html	**Media Literacy.** This is the VidKids page all about using video, including lesson plans and samples of work. If you have the book *VidKids*, this is the next step. A good resource.	4	4	1–4
http://postcards.www.media.mit.edu/Postcards/Welcome.html	**The Electric Postcard** enables anyone to choose, write, and **e-mail postcards** to anyone with an e-mail address. Fun way to teach e-mail skills and encourage writing. The site provides a good vehicle for practicing the various genres of writing that various e-mail messages require.	4	4	all
http://www.mala.bc.ca/~mcneil/matrix.htm	**Malaspina Great Books Interdisciplinary Matrix.** If you are trying to track down the great books of the world written before 1450 and through modern times, this matrix brings you the goods. It is broken down into such categories as art, music, science, theater, and many more.	4	4	8–12
http://ipl.sils.umich.edu/youth/StoryHour/	**Story Hour offers well-written and illustrated picture books for younger readers.** This Internet Public Library site also has some animated versions of the stories you can download and play on your own computer.	4	4	K–3
http://www.iearn.org/iearn/projects/av.html	**One of the I*EARN projects, A Vision** publishes art, poetry, and prose written by students aged 13 and older. The mission of the site is to use these works of creative writing to demonstrate that "despite linguistic, cultural, ethnic, and racial differences, teenagers around the world share the same hopes, fears, concerns, and interests." Your class can join this ongoing project any time.	5	5	8–12
http://www.rmplc.co.uk/eduweb/sites/chatback/dickens.html	**Victorian Lives & Letters.** One of the Chatback Trust projects that encourages students to examine topics and make commentary. They particularly encourage students with special needs. In this project, Charles Dickens rises from the grave to discuss the Victorian times. This excellent concept uses the strengths of the Internet.	5	5+	4–12
http://www.burningpress.org/bphome.html	**Burning Press.** This collection of topical sections deals with such topics as WWW-based "intermedia," a virtual gallery of online visual literature (vislit) and audioart, performance and sound poetries, and several other avant garde topics. If you seek to remain at the forefront of where technology and the English language fuse, this site is a good place to visit.	5	5	8–12

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http://www.annefrank.com/	**Anne Frank online.** *The Diary of Anne Frank* is one of the most studied texts in schools throughout the world. This excellent site provides information on her life and times that students and teachers will find invaluable as well as information from the Anne Frank Center, from the travelling Anne Frank Exhibit, and on integrating all this material into the classroom. Great photo album/scrapbook. Excellent site.	5+	5+	4–12
http://www.newslink.org/	***American Journalism Review.*** For senior journalism students this site from *AJR* is excellent, offering good information on job opportunities, educational training opportunities, and general journalism information. The site also features links to most online newspapers as well as magazine, TV, and radio sites.	5	5	10–12
http://members.home.net/brunner/projects/monster.htm	**Monster Exchange Program.** Great fun here for grades K–3. Students design and draw a monster, write a description, and send it to a companion class around the world whose students then try to draw the monster described. More than 6,000 students are involved in this project, and it is an excellent interactive language exercise.	5	4	K–3
http://www.indiana.edu/~eric_rec/	**ERIC Clearinghouse for Reading, English, and Communication.** This is the largest database in the world of educational materials. It includes bibliographies, some great read-along stories, a massive bookstore, and a range of professional development options for teachers of language and English.	4	5+	all
http://www.2cyberlinks.com/monster.html	**Monsters, Monsters, Monsters.** This language project uses e-mail and the web to link groups of students around the world. The project includes communication skills, art, and the theme of monsters. Excellent motivational site for all students.	5	4	K–6
http://www.edunet.com/english/grammar/toc.cfm	**The Hampstead School of English On-Line English Grammar.** The home of the English language. Find out the correct grammar from the most correct of grammatical sites, which contains audio instruction on correct pronunciation of the letters of the alphabet (some humble pie to be eaten here) as well as how to treat adjectives, adverbs, and nouns. You can also learn the correct use of possessives, pronouns, verbs . . . the list goes on. Very authoritative and thorough.	4	5+	all
http://www.primenet.com/~omnibus/whats.htm	**Omnibus.** This is a "scrambly-riddly-rebusy-charady-punny" word game. The game requires students (players) to solve a riddle using cryptic clues. The puns are terrible, but it's a good, fun word game.	5	5	10–12
http://members.aol.com/gulfhigh2/words.html	**A Collection of Word Oddities and Trivia.** This is a great collection of word trivia such as the words aa, iao, oii, euouae, oo, I, and O consist entirely of vowels; dreamt is the only word in the dictionary ending in "mt"; latchstring has six consonants in a row; and much more. So if you know the two words of Basque origin in the dictionary (Webster's New International), don't bother with this site; you know everything! Great for a "quote of the day."	4	5	all
http://netnet.net/~jgales/game1.html	**Vocabulary Stretching Games.** Good simple games using some clever Java script. Two games based around matching obscure words with their definitions. Good fun as a filler, or print them and try them out with the whole class.	5	4	4–12
http://www.tcr.org/sample_essays.html	**The Concord Review: Sample Essays.** This is a collection of sample essays on historical topics in general written mostly by high school students. They are very well written, and teachers may enjoy using them to demonstrate style and structures they seek from their own students.	4	4	10–12
http://www.cc.columbia.edu/acis/bartleby/strunk/	***Elements of Style.*** The infamous and essential book is online with its rules of composition, including spelling, commonly misused words and expressions, and commonly misspelled words. Very formal but very correct.	4	5	all

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http://discoveryschool.com/spring98/programs/greatbooks-catch22/index.html	*Catch 22.* This classic book has its own documentary through the Discovery program, and this is the support site with great backup materials. You can purchase the video of the program for just $24.95 and receive additional support materials, but plenty of activities/ideas are online already. Great resource for all language and English teachers.	5	4	9–12
http://www.mlckew.edu.au/english/intros.htm	**Writing Introductory Paragraphs.** This excellent essay style presentation is succinct and well laid out, and every teacher can use this. The same principles apply to oral and written introductions. Download this and use it.	4	5+	all
http://discoveryschool.com/spring97/programs/greatbooks-theodyssey/index.html	***The Odyssey:* Homer.** Some students think the only Homer who ever lived is part of the Simpson family, but this site presents *The Odyssey* in a context that even the most reluctant learner will enjoy. The site supports the video of the same name by the Discovery channel. Good support material here, and the video is only $24.95 if you missed the program on TV.	5	5	4–12
http://www.screen.com/mnet/eng/med/class/	**Media Awareness Network: For Educators.** This huge resource and support site for teachers of media literacy includes an educational rationale for those not yet convinced of the need for this area of instruction, units of work from teachers of media education around the world, a resource index, lists of support organizations, background material on educational issues in this field, and links to relevant discussion groups.	5	5+	all
http://www.mlckew.edu.au/english/five_par.htm	**Writing the Five Paragraph Essay.** This essay, of more than five paragraphs, is one of the definitive and erudite presentations on this skill. All teachers should take note of the process Harry Livermore presents. Excellent.	4	5+	all
http://www.romeoandjuliet.com/	**Romeo & Juliet.** Some traditionalists might not like the style, but this contemporary film starring Leonardo DiCaprio and Claire Danes had kids queuing to catch the Shakespearian tale retold in a modern context. This site and a viewing of the film would set the stage for a compare and contrast exercise for senior students. There is plenty of material here to support the concept, including "Meet Bill Shakespeare," some excellent background information, and the Palace Chat Room.	5	5	9–12
http://www.mlckew.edu.au/english/	**The English Teachers' Website.** This great collection of reviewed links and sites is of use to all English teachers. The sites are divided into areas such as Issues/Media, Literature, Writing, and Technology, and additional areas deal with search engines, news and information, and other useful topics.	4	5	all
http://yarra.vicnet.net.au/~ozlit/index.html	**OzLit: Australian Literature.** This site has 300 pages of material and more than 700 entries in a books and writers database. There is also a book exchange, but the core of the site is six chapters of material ranging from literary sites, Australian literature, poetry collection, a research section, and bookmarks. This is a labor of love and not a commercial site, but it has been constructed well and is useful to all teachers of English and literature.	4	5	all
http://www.ih.k12.oh.us/ms/woodring/yawcbook.htm	**Young Adult Books From Around the World.** This is a great selection of reviews of books sets in various cultures by a 7th grade English class. Reviews cover literature of Africa, Asia, India, Latin America, the Middle East, and Europe.	4	5	4–9
http://shoga.wwa.com/~rgs/glossary.html	**Glossary of Poetic Terms.** This massive collection of information on poetic terms and structures comes complete with cross references, quotations, information that goes beyond the brief definition, and examples with references to additional works. Excellent resource for serious poetry work.	5	5	8–12

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

URL	Comments	presentation	content	grade level
http://www.bham.wednet.edu/bio/biomaker.htm	**The Biography Maker.** This wonderful site helps students take biographical information and produce an interesting piece of writing. There are four introductory sections, then you enter information into the main course, the Biography Maker, which follows four steps: questioning, learning, synthesis, and story telling. The dessert of six traits of effective writing makes for a fine meal.	5	5	4–12
http://www.loiswalker.com/catalog/index.html	**Readers Theatre.** Oral language is the weak point of many language programs. This site offers a tool to develop oral skills and link them to written language. There are sample scripts (other scripts have a fee), and if the enthusiasm of the author is anything to go by you will be hooked on this concept!	4	5	all
http://bay1.bjt.net/~melanie/take.html	**Take Our Word For It.** This highly entertaining and informative site discusses the origin of words. Check out the Words to the Wise section, Spotlight—a column looking at the origin of words, an excellent section on the origin of word roots, and the word of the week.	5	5	all
http://cslewis.drzeus.net/	**Into the Wardrobe: The C. S. Lewis Web Site.** This web site is a testament to the literary works of C. S. Lewis. Excellent material includes his works, news, FAQs, a photo album, and plenty of background material.	4	4	4–12
http://www.ukans.edu/cwis/units/coms2/vpa/vpa.htm	**Virtual Presentation Assistant.** This is an excellent online tutorial for improving public speaking skills. The importance of oral language development cannot be underestimated. Teachers in general need to spend more time teaching these essential skills. The suggestions here are pertinent and well set out. Highly recommended for all teachers.	5	5+	all
http://www.vocabulary.com/	**Vocabulary University.** Only in cyberspace, but it is great. This site has three levels, beginning with grade 3. A form asks for contexts you wish to work on, then you move to some very interesting puzzles. This makes a great learning center.	4	5	3–12
http://clever.net/quinion/words/index.htm	**World Wide Words.** Check out the Turns of Phrase for words too new to be in the dictionary or Weird Words. Usage Notes will empower you and your students to use words as a rapier, and a range of articles (50+) deal with origins of words and interesting word stories. Excellent site.	4	5	all
http://207.125.183.3/jobe/CreativeWrit/Flats1.html	**Flat Stanley: Creative Writing.** Check out Flat Stanley, a very clever idea that has become an education enigma. See how to create Flat Stanley and follow his global exploits. Excellent writing and reading activity.	5	5	K–8
http://library.advanced.org/10015/	**Motion-Picture Industry.** The history of the motion picture industry is here as well as excellent insight into what happens behind and in front of the cameras. You can take up the challenge and make your own film while online.	5	4	4–12
http://www.vcu.edu/artweb/playwriting/seminar.html	**The Playwriting Seminars.** This set of online seminars lends to the experimental rather than the orthodox, but a lot of what is said is true of any context used. The seminars deal with content, film, structure, working and techniques, format, and the business of playwriting. Excellent material. Some great quotes inspire and challenge. A great site for all teachers involved in stage work of any type.	4	5+	all
http://www.oise.on.ca/~nandersen/pad.html	**Media Launchpad.** This site is for people studying electronic media. The site also coins a new phrase "Mediacy." Check out the articles and links here if you incorporate electronic media as one of your language vehicles for study. There are introductory notes for both teachers and students on how to make the best use of this site.	4	5	8–12

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

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URL	Comments	presentation	content	grade level
http://www.ipl.org/	**The Internet Public Library.** This vast resource works the same as the local "real" library but issues virtual copies of texts, journals, books, and newspapers. With nearly 2,600 journals, 7,700 texts, thousands of books, and more than 2,000 newspapers, this library is seriously big. Excellent cataloguing means material is easily referenced.	4	5+	all
http://www.fis.utoronto.ca/~easun/looking_glass/index.html	***The Looking Glass.*** This electronic journal covering children's literature looks at the issues surrounding the teaching of the English language in schools with excellent articles on the use of the web in the classroom. Emphasis is on the use of books either virtual or real.	4	5	all
http://www1.minn.net/~schubert/Play.html	**Playwriting-in-the-Round.** At this project-based site, students collaborate to write the scripts for four mystery plays. Each play consists of four acts with each class in the circle producing one act each. Each class ends up writing four acts for the four plays, passing on its work to the next group in the circle. The playwriting season starts in February of each year. This excellent idea could be organized without this site if you want to start at another time in the year.	4	4	4–12
http://www.coder.com/creations/tale/	**The Neverending Tale.** This is a tale without an end. Students add to the story as they see fit, making choices about where the story goes. The site is very useful in identifying consistency in plot and the development of the storyline via storyboarding.	4	5	K–8
http://www.tcf.ua.edu/screensite/	**ScreenSite: for the Study of Film and Television.** Excellent site for teachers of drama, visual language, and film and TV studies. The site deals with film and TV production and education research in this area. It has resources for teachers and a chat room. Excellent material.	5	5	all
http://www.sentex.net/~mmcadams/spelling.html	**A Spelling Test.** The most often misspelled words—50 of the trickiest words—and to make it harder, the site has both the correct spelling and the common mistake just to confuse you. Have all students take this great test.	4	4	all
http://www.niva.com/writblok/index.htm	***Writer's Block.*** This online magazine and reference tool for writers has some great articles. The Winter '95/'96 edition has an excellent article on the effect of technology on writing.	4	4	all
http://www.netspace.net.au/~saccroy/michael.htm	**Literacy through a Genre Approach.** Michael Day has a couple of very good essays at his site, and this is one of them. His outline for a good literacy program is useful to all teachers of language.	3	5	all
http://www.geocities.com/Hollywood/Hills/1902/	**Teaching Media Production in the Middle School.** From the desk of Stephanie Drofos-Rusnak comes an excellent resource for teachers. Choose from day-by-day lesson plans, course outlines, sample class handouts, and some technique issues as well as some good links. Excellent site; start here for media ed.	4	5+	4–12
http://www.m-w.com/about/look.htm	**A Brief Look at the History of English.** We use language every day and study its applications, but rarely do we look at where it came from other than brief sojourns dealing with spelling issues. This site is not extensive, but it provides some good insights into how the English language developed and what its contributing roots are. After reading this, no one will be surprised at the complexity of English. This fascinating material would make a good study at the beginning of a new year.	4	5	all
http://www.aber.ac.uk/~dgc/medmenu.html	**The Media & Communication Studies Web Site.** Excellent and very comprehensive UK web site deals with every aspect of media and communication—visual image, film studies, advertising, media influence, TV and radio, the written and spoken word, pop music, and much more. Tell the authors why they should continue this site!	5	5+	all

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

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http://ww.state.nj.us/statelibrary/srchover.htm	**Tapping Database Treasures.** This good, text-based online course covers the skills required to search a database effectively. Topics include key word searching, Boolean logic, the thesaurus, and how to narrow or broaden the search. The site also contains a section on issues associated with students searching the Internet.	4	5	all
http://ebbs.english.vt.edu/hel/hel.html	**History of the English Language.** As well as a rich information landscape, this site also has a discussion list on the subject to which you can subscribe and extensive links to material dealing with the evolution of the language we call English.	4	4	10–12
http://icg.fas.harvard.edu/~chaucer/	**Geoffrey Chaucer.** This support site for Harvard University's Chaucer class has collections of texts but also a great collection of information on Chaucer's life and on the Middle Ages. Much of the information focuses on *The Canterbury Tales*, but the site is a very worthwhile repository of knowledge dealing with both the author and the time in which he lived.	5	5	8–12
http://www.jetlink.net/~massij/shakes/	**The Shakespeare Classroom.** This site is a support tool for senior high teachers and students. Study questions, information on filmed versions of the works of Shakespeare, sample assignments, syllabi, useful facts, and links to other support sites are all here.	5	5	10–12
http://deil.lang.uiuc.edu/web.pages/grammarsafari.html	**The Grammar Safari.** "Students of English who limit their study of grammar to what they find in grammar books are like naturalists who limit their study of nature to the encyclopedia . . . It isn't easy . . . it's a jungle out there." This site looks at grammar on the Internet! Excellent site examining issues in context.	5	5+	all
http://www.screen.com/mnet/eng/med/kids/kindex.htm	**Kids Corner: Television, Film & Video.** This good site contains reviews and a set of links for students to investigate the effects TV, video, and films have on our lives. The sites relate to the students and are designed specifically for them.	4	5	4–12
http://www.ceindy.org/	**Children's Express.** This is a great set of themes students contribute to, and the site author provides newspaper clips and other media documents to support the current theme. Themes include Northern Ireland, Kids & Grief, Animals, Space Exploration, and Kids & Television. Each year, new themes are set and dynamic discussions take place. Excellent language opportunities via a web site, e-mail, and a chat area.	5	5	4–12
http://www.dirckhalstead.org/	***The Digital Journalist.*** The increasing move to the use of visual imagery in communicating concepts, ideas, and products has spawned completely new employment opportunities, and digital journalism is just one. The site demonstrates the power of the visual image and the potential for the use of imagery. This multimedia magazine of photojournalism emphasizes digital collection, transfer, and manipulation to form the final product.	5+	5	8–12
http://www.inkspot.com/	**InkSpot: The Writers Resource.** This is a great site for aspiring writers. Authenticity is essential in the curriculum, and its effect on the motivation of students is well recorded. This site allows students to contact authors and experts on writing. It also offers articles, writing and marketing advice, interviews, tips, guides on writing well, workshops, and links to other good sites on the web.	4	5+	8–12
http://www.acs.ucalgary.ca/~dkbrown/authors.html	**Children's Authors & Illustrators on the Web.** It is helpful to discover more about the author of the book studied to obtain insight into the text. This site provides a range of web sites on authors, many with interviews and personal background information.	4	5	K–6

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

URL	Comments	presentation	content	age group
http://www.nytimes.com/	***The New York Times.*** This excellent paper is available online after a free registration process. Sections cover the arts, science, sports, technology, international news, and much more. Newspapers are an excellent vehicle for encouraging reading and the use of different language genres.	5	5	8–12
http://www.penrithcity.nsw.gov.au/usrpages/collect/welcome.htm	**Children's Authors.** The site's intent is to interest people in collecting children's books, but in the process it provides a good set of links to authors and support sites to children's books and magazines.	4	4	K–6
http://www.acs.ucalgary.ca/~dkbrown/index.html	**The Children's Literature Web Guide.** This extensive guide supports children's literature on the web. It has many stories one can use in class, on a one-to-one basis, or as a learning center. The site also has lists of journals and research guides, discussion groups, conferences, teaching ideas, and much more. Great site.	4	5+	K–9
http://www.ala.org/aasl/ip_nine.html	**Information Literacy Standards for Student Learning.** This set of draft standards for information literacy has been developed by the American Library Association. Quite unique, the standards incorporate information literacy with independent learning and social responsibility, providing a very strong context for their implementation. There are only nine standards, so they can be implemented simply with the appropriate enhancement of teaching skills.	5	5	all
http://www.screen.com/mnet/eng/med/bigpict/8keycon.htm	**Eight Key Concepts of Media Literacy.** Many new ideas are wrapped in so much fine detail that the big picture gets lost, and the concepts cannot be implemented. Here are eight concepts that underlie the emerging field of media literacy. They are tightly written and well presented and get to the heart of each concept. Print them, laminate them, and put them up on the classroom wall.	5	5+	all
http://www.twnn.com/About.htm	**The Writers' Nook.** This is a resource site for all aspiring writers. The material is very encouraging and at the same time "correct." A well-balanced site for students to refer to and an excellent ideas site for teachers.	4	5	4–12

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teachers@work http://www.teachers-work.com

Mathematics

URL	Comments	presentation	content	grade level
http://www.csun.edu/~hcmth014/comics.html	**Math Cartoons.** This will be probably the most used math site on the web. It's a great site to acquire some good visual images to emphasize a point. Use the comics on the OHP or in units of study, but be sure to read the copyright information provided.	4	5+	all
http://euclid.math.fsu.edu/Science/math.html	**The WWW Virtual library math section.** Lots of links to math sites and gopher information as well as references to periodicals, reprints, and more.	4	5+	all
http://www-sci.lib.uci.edu/HSG/RefCalculators.html	**Calculators On Line.** You're probably expecting a really boring site, but come in for a surprise. Check out the jumping sheep calculator as well as the more serious stuff. Some good material here shows the value of calculators in context. Good math.	5	5+	all
http://freeabel.geom.umn.edu/	**The Geometry Center.** This very large site contains everything to do with geometry and geometric structures. Updated regularly, the site provides a lot of very useful material for almost all teachers at any level, including interactive math resources, some good Java applications, plenty of software to download, and multimedia documents. A great site.	5	5+	all
http://www.kqed.org/fromKQED/Cell/math/mathmenu.html	**Math Online Helpline.** This well-structured site has useful puzzles, math talk, math news and events, and a resource center. A general online help page, it allows you to gain some insights into the do's and dont's of math and the Internet.	5	5	all
http://www.crpc.rice.edu/CRPC/Women/GirlTECH/Lessons/	**Interdisciplinary Lesson Plans.** The result of GirlTECH 95 through GirlTECH 97, each of these activities makes use of the Internet to teach a concept in an interdisciplinary manner. Excellent work here in "Pizza Your Way," the "Indy 500," and "A Functional Housing Market." Some excellent math is embedded in good overall concept topics. Suitable for elementary grades (the more able students) upward to grades 10 and 11.	5	5	all
http://www.cs.washington.edu/research/metip/metip.html	**Mathematics Experiences Through Image Processing.** Great applied mathematics using image processing to encourage the conceptual approach to math along with an emphasis on group learning, open-ended problem solving, and the practical uses of mathematics. This is great math.	5	5	all
http://forum.swarthmore.edu/	**The Math Forum.** This excellent site looks at math resources by subject and by key issues in math education and provides some math news. The well-presented site contains material for students from kindergarten through high school.	5	5	all
http://www.c3.lanl.gov:80/mega-math/	**A top math site hosted by the Los Alamos National Laboratory.** Visit Hotel Infinity or have an unusual day at the unusual school. A great all-around site for both students and teachers with a very extensive collection of very good material, this could be a great reward site or a place to encourage less able students. Some great reading activities based on problem-solving skills fit in very well with a cross-curriculum approach in the elementary classroom.	5+	all	4–12
http://www.scienceacademy.com/BI/welcome.htm	**BasketMath Interactive.** This collection of online problems in mathematics arranges questions into themes and topics and includes simple arithmetic, graphing, maps, operations, and much more.	4	4	4–12

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http://www.geom.umn.edu/docs/snell/chance/welcome.html	This **database of chance and probability** uses contemporary texts such as newspaper articles as sources of information for evaluating probability. The ideas here are excellent and well presented. Don't be afraid to download the Adobe Acrobat reader; it takes only about 20 minutes and is about 1MB.	5	5	4–12
http://www.teachnet.com/lesson/matmap.html	One of a series of good **lesson plans on maps and graphs from the Teachnet site**, it contains about 50 lesson plans at the main site. They are well thought out and well presented.	4	5	all
http://www.cs.rice.edu/~sboone/Lessons/Titles/popclock.html	In **The Popclock** site, students use data from the U.S. Census Bureau Home Page to gather data, manipulate it, and project forecasts. Good application.	4	5	all
http://csr.uvic.ca/~mmania/	**Mathmania** is an excellent site for mathematicians in grades 9–12. It contains online resources for working with open problems in mathematics. The well-maintained site investigates the problems mathematics has not answered yet. The admission that everything about this subject is not known is refreshing.	4	5	9–12
http://www.kings.k12.ca.us/math/	An extensive source for **online math lessons and resources**, this site is well worth a look for ideas and supplements to students' everyday work. The material is well organized into levels, and material is available for all curriculum levels.	4	5	9–12
http://www.crpc.rice.edu/CRPC/GT/bchristo/lessons/StanDev1.html	**Using Standard Deviation.** This site offers a good example of how to use the Internet to teach a principle based on real-time data. The data used are weather reports from the San Francisco Bay area, but local weather data can be used just as well. Good application site.	4	5	9–12
http://www2.hawaii.edu/suremath/home.html	This is **a great site for teaching kids to solve problems** (mathematical ones at least) successfully. Professor McAllister demonstrates a concept-based method for problem solving and presents a range of problems on which to test the theory. The problems are ingenious and good fun. Definitely worth a visit.	4	5	4–12
http://forum.swarthmore.edu/~sarah/shapiro/	**Geometry through Art.** This very comprehensive set of lesson plans/assignments includes concepts, teacher's masters to print, and tips on teaching vocabulary. This is great math that is suitable for kindergarten through grade 8. A great resource.	4	5	K–8
http://eyelid.ukonline.co.uk/ancient/numbers.htm	**Egyptian mathematics.** This is an excellent site for math teachers to demonstrate powers of 10. Students love variety, and this approach is certainly different. Teach students the Egyptian decimal system and how to add tadpoles to coils of rope or subtract the lotus plant from a finger! Very well constructed and easy to follow.	5+	5	all
http://www.richmond.edu/~ed344/96/math/	**What Good is Math?** Good question, and here lies the answer. The page provides excellent examples of how one can apply math learned in school to everyday living. Activities fall under such headings as "So you're planning a trip," "How did I get a C in Spanish?" "So you're planning a party," and many more. A good site to have students rotate through.	4	4	4–10
http://www.coolmath.com/	**Cool Math!** This very lively and dynamic site comes complete with some great math support. Sections include tessellations, "What's a Function?," "What's a Limit?," fractals, puzzles & problems, "How to Succeed in Math!," careers in math, and much more. Designed primarily for senior students.	5	5	4–10

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http://www.srl.rmit.edu.au/mav/PSTC/index.html	**Mathematical Problem Solving Task Centers.** This site assists teachers using task centers, or **learning centers**. Some excellent ideas, problems, and presentation concepts are here. If you want to set up learning centers in the classroom, this is a good support stop.	4	5	4–12
http://forum.swarthmore.edu/mathmagic/what.html	**MathMagic.** A site devoted to developing communication and problem-solving skills. You register, at no cost, and check out the past challenges to see into what level you or your students fit. Meet MrH, then log on to the next event. The events start with first grade students and move through high school.	4	5	1–12
http://www.actden.com/	**The Digital Education Network.** Placed here due to its excellent MathDEN, this is a great site, really well put together with excellent content. You must enroll but it's all free. The site contains four stages of problems as well as challenges and progress reports.	5	5+	all
http://www.ee.ryerson.ca:8080/~elf/abacus/	This great page looks at **how an abacus works.** Through a Java applet, you can move the beads and carry out the activities set up. A good learning center.	5	4	all
http://aleph0.clarku.edu/~djoyce/mathhist/time.html	**History of Mathematics.** This is an excellent graphic presentation of the history of mathematics from Thales through Turing. Links to other sites deal with the history of math.	5	4	all
http://www.mcs.net/~highland/tess/tess.html	**Tessellations.** Some good student examples using a free demonstration program. This is a good site for checking out the Escher examples as well as other notable tessellations. The concept of transformation via rotation and translation is a fundamental mathematical concept, and this site provides a good context for applying these principles.	5	4	all
http://tommy.jsc.nasa.gov/~woodfill/SPACEED/SEHHTML/math.html	**NASA Space mathematics.** A good collection of mathematics problems on the theme of space, mostly for senior high school students. The site contains good contexts for students to see that the mathematics they study does have major applications.	5	4	9–12
http://www.geom.umn.edu/apps/gallery.html	**Gallery of interactive geometry.** Excellent for grade 12 math students, the site includes labs, questions, and exercises such as building a rainbow. Some of the pages will extend even the best students.	5	4	6–12
http://www.sci.mus.mn.us/sln/tf/b/bubblegeometry/bubblegeometry.html	**Bubble Geometry.** This excellent site uses bubble making to demonstrate the mathematics of shapes. Bubbles are a fun and effective means to introduce the concepts of spatial relationships to younger mathematicians.	5	5	K–8
http://www.nova.edu/Inter-Links/puzzles.html	**Puzzle Archive.** This great collection of puzzles is archived from the news group rec.puzzles. You even get the solutions thrown in. Best to print this, then use the puzzles as appropriate. Suitable for upper elementary and up.	4	4	4–12
http://www.hmco.com/school/math/res/parentbk/	**A Guide to Helping Your Child Understand Mathematics.** Some good principles that everyone needs to be reminded of from time to time are here. Its useful information makes this site, produced by a publishing house, a good self-help stop for some kids as well as parents.	4	4	all

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

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http://cq-pan.cqu.edu.au/schools/smad/smad.html	Why reinvent the wheel? This is the **Secondary Mathematics Assessment & Resource Database.** This is a collaborative approach to developing an item bank of assessment examples for secondary schools. The emphasis is on nontraditional assessment. There are also jokes, puzzles, shareware, and much more.	4	4	6–12
http://www.inetworld.net/~houlton/	**Magic squares and cubes.** This site offers some great advice about how these are constructed and some samples to show off the process. All is based on good math, and kids love the challenge of completing half-formed squares and cubes as well as making their own.	4	4	4–12
http://www.oise.on.ca/~sinkpen/SARAH.html	**Mathematics Education for the 21st Century.** This is not just math; the site author offers discussions on how teachers will teach to survive and keep up with the onset of the 21st century. Some excellent material here, but careful of the hype.	5	3	all
http://www.maths.tcd.ie/pub/HistMath/People/RballHist.html	**Mathematicians of the Seventeenth and Eighteenth Centuries.** A chronologic presentation of mathematicians from this era, this compilation is very well done. It lists 120 mathematicians with biographies of varying quality. This could be good research page for students developing a time line of development of particular mathematical concepts.	4	4	7–12
http://www.utm.edu/research/primes/	**The Prime Pages.** If you want information about prime numbers, go no further. This page has it all. It explains what primes are and how to find them, the largest prime, and how many exist. It also discusses the Mercenne Primes as well as lists of prime numbers and prime factorizations. A good list of software for calculating primes is also included. Do not miss the Gallimaufry section!	4	5	4–12
http://www.tidusa.com/PEHP2000/Planet_Earth/numbers.html	**Planet Earth Home Page links to worlds of numbers.** If you want to introduce math concepts in different contexts, this page is full of examples using numbers in everyday life. Everything from the calendar to time zones, world population statistics, national debt, phone numbers, currency exchange, scientific constants, conversion tables, pi, number types, and weights and measures are all here. A great reference page for all mathematicians.	4	5	all
http://forum.swarthmore.edu/alejandre/magic.square.html	**Magic Squares.** Here you can find out all about magic squares in all their different forms, including Lo Shu squares, Albrecht Durer's squares, Benjamin Franklin squares, and Sator squares. But best of all, the sites provides background information on the squares and a range of classroom activities you can print freely for use in the classroom. Excellent resource.	4	5	4–12
http://www.kidlink.org/KIDPROJ/Math/	**Math Penpals: Communication Through Numbers Project.** This ongoing project links kids around the world who have an interest in math. They can send statistical information or problems to each other through this network.	4	4	all
http://www.nctm.org/jrme/	***Journal for Research in Mathematics Education.*** This is the serious math site about the serious issues. If mathematics research interests you, you will have a great time here. The journal and reviews are included. This is a subscription site for the heads of math and the pretenders.	4	4	7–12
http://www.algebra-online.com/	**Algebra Online.** This is a great service from a committed group of math teachers. Students can ask questions and receive personal tutoring for free! A mailing list you can join supplies weekly information to students and teachers on all things algebraic. There is also a chat area and a message board.	5	4	7–12

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

URL	Comments	presentation	content	grade level
http://mstemac4.ed.uiuc.edu/mccall/mainlesson.html	**Lessons to Motivate Underachieving Mathematics Students.** Some good material exists here for grade 4–10 teachers in particular. The site also has a good registry of freeware/software for math teachers. It highlights a problem-solving approach throughout.	4	4	4–10
http://www.anglia.co.uk/education/mathsnet/intro.html	**MathsNet.** This excellent UK site has a lot to offer, mostly for grades 7–12. The site offers support for various math computer programs as well as a good list of free-to-download material that would be useful in all classrooms. There are pages on logo, spreadsheets, and graphing with an emphasis on the use of information technology in math. A well-presented and useful site.	4	5	7–12
http://www.geom.umn.edu:80/~banchoff/Flatland/	**Flatland: A Romance of Many Dimensions.** Good to see some romance in the math department. This classic Edwin Abbott (1838–1926) story deals with the concepts of dimensionality. It's a brilliant story, faithfully reproduced here in full. If you want to intrigue your students with what it would be like to live in flatland (2-D), read them this story in parts over four weeks. They will enjoy the change in teaching style, and the story, which gives an excellent foundation to the understanding of dimensionality, will stay with them forever.	4	5	4–12
http://www.indo.com/distance/	**How far is it?** Simply select any two towns anywhere in the world, and this program will tell you how far it is from one to the other. The use here in math is through approximations. Students are given maps of Earth and some standard measurements, such as the diameter of Earth, and they have to approximate the distance between two cities before the program calculates it for them.	4	4	all
http://www.c3.lanl.gov/mega-math/workbk/dom/dom.html	**Algorithms and Ice Cream for All.** A good site within the mega-math domain, this site looks at where to place an ice cream stand in the town so people from different areas of town have to walk the least net distance. The site provides this puzzle as an introduction to using algorithms to solve such problems. The central tenet here is for students to understand the concept of a proof.	4	4	7–12
http://forum.swarthmore.edu/mathed/tech.mathed.html	**Technology in Math Education.** This is a good collection of resources for the math teacher who is looking to maximize the use of technology in the classroom. It offers good case study material, forums, and links to support sites for the various technologies (calculators, computers).	4	5	all
http://www.ncsa.uiuc.edu/Edu/RSE/RSEorange/buttons.html	**∏ Mathematics.** This web site is dedicated to the most irrational number math has ever come up with. All the information you could possibly ever want on the history, as many decimal points as you've had hot dinners (not that you have had 6 billion dinners, just an analogy thing!), projects, and applications.	4	5	7–12
http://www.wolinskyweb.com/measure.htm	**Measure 4 Measure.** Measurement is critical in getting a feel for number concepts, and this site is a collection of sites that will help students get a feel for numbers by providing contextual experiences relevant to their everyday lives.	3	5	all
http://www.aamt.edu.au/welcome.html	**The Australian Association of Mathematics Teachers (AAMT)** home page includes teachers talking to teachers, readings for teachers of mathematics, the Internet site of the week, and reports on the outcomes of various national projects. You can also check out "Live Mathematics on the Web." Download the software, and you can view animated units of work written in "Mathview." Some good material here for all math teachers.	4	5	all
http://sal.cs.uiuc.edu/~jeffe/mathgames.html	**Mathematical Games, Toys, and Puzzles.** This is a huge collection of games, toys, and puzzles that are well collated and set out for students to explore. This will keep the extension class going forever as well as provide a good basis for a learning center.	4	5+	all

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http://www.maa.org/	**MAA (Mathematical Association of America) Online.** This site offers a lot for any teacher of mathematics. You can elect to receive an online e-mail updating service and look through the articles, features, and discussion documents. Topics range across all levels. For senior teachers, a journal, *Communications in Visual Mathematics*, coming online soon looks very interesting.	4	5	all
http://www.ping.be/~ping6758/	**Maths Info-Structure: World of Numbers—Palindromic and Other Recreational Numbers.** Great site for all those who love palindromes and other curious reversals. There are triangulars, tetrahedrals, squares, cubes, and primes here to explore. The site is well worth a visit and would make a great learning center to extend the more able students.	5	5	9–12
http://www.mathleague.com/help/help.htm	**Math League Help Topics.** This excellent site is full of explanations and examples of mathematical concepts such as whole numbers, decimals, fractions, ratios, integers, algebra (introduction), and much more. Written specifically for grades 4–8.	4	5	4–8
http://forum.swarthmore.edu/k12/mathtips/beatcalc.html	**BEATCALC: Beat the Calculator.** Yes, you can beat a calculator if you just learn these 50 or so rules. Actually they are very good ways of doing calculations mentally very quickly. This is great material for keeping the neurons fired up and ready to go—the equivalent of calisthenics for the brain.	4	4	all
http://www.ccsf.caltech.edu/~roy/dataquan/	**Data Powers of Ten.** Bytes used to be the basic unit in computer talk, then we were using kilobytes, then megabytes, and now standard hard drives come with gigabytes of storage. Soon we will see terabytes. Somewhere along the way the numbers became meaningless, but here you can check out just what a megabyte is and not just in numeric form. The site provides physical examples of what 5MB is: the complete works of Shakespeare or 30 seconds of high quality video. Refreshing and rather daunting at the same time. Don't forget the zetabyte!	4	5	all
http://schoolcentral.com/Necklace/vic2.htm	**The Lost Necklace.** This site combines a lost necklace, an animated rabbit, a tour of Victoria, British Columbia, and math problems in an effort to make math fun. The site succeeds well and is well worth a visit or use as a reward site.	5	4	K–8
http://schoolcentral.com/willoughby5/default.htm	**Willoughby Elementary School Presents: Stanley Park Chase.** Chase Dexter the dog through Stanley Park and do some math along the way. Well-presented, fun math with a twist. Suitable for grades 2–8 or with guidance, grades K–8.	5	4	K–8
http://www.un.org/Pubs/CyberSchoolBus/special/drdata	**Dr. Data Quiz.** This wonderful site presents data on all sorts of social issues from around the world. Have students take the information on forests, refugees, oceans, education, telecommunication, and much more and make projections and predictions.	4	5	all
http://math.vanderbilt.edu/~schectex/commerrs/	**The Most Common Errors in Undergraduate Mathematics.** Professor Eric Schechter is tired of seeing the same errors from his undergraduate classes and has listed the most common errors. Check this site out and help students make new and interesting errors that will stimulate this man's life.	4	4	9–12
http://math.bu.edu/DYSYS/chaos-game/chaos-game.html	**Chaos in the Classroom.** "Most often, discussion of chaos and fractals degenerates to 'pretty picture shows,' devoid of any mathematical content," so check out Mr. Devaney's site and try the Chaos Game. This site has mathematics that is "even prettier than the pictures themselves!"	5	4	9–12

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http://www.webcom.com/calc/main.html	**Calculating Machines.** This great site brings to life, using a collection of sites, the development of calculating machines. Students cannot believe we have not always had computers, or teachers were around when we punch holes in cards and sent them away, just to find out the product of 234 x 234. Java applets allow students to have a go at using a virtual "Felt" Adding Machine.	5	5	4–12
http://www.bangor.ac.uk/ma/CPM/welcome.htm	**Center for the Popularisation of Mathematics.** Had enough of people thinking of you as boring if you teach mathematics? If so, this is the site for you. This British site has lots of ideas and examples of what can be done to change this thinking. There are also links to sites that can help you in your "math marketing" exercise.	4	4	all
http://www.gcschool.org/abacus.html	**The ABACUS International Math Challenge.** This competition started in Hungary in 1994 and provides a good incentive to have students attempt a set of math problems each month. You can register your school and get the problems sent each month, or check out the archive of problems at the site. Problems are grouped for grades 3–4, 5–6, and 7–8. Higher level thinking skills are required for some of the problems.	4	5	4–8
http://www.bonus.com/bonus/card/mathematicalquotations.html	**Mathematical Quotations.** This is a great selection of quotations teachers can use to introduce topics or add to units of work even if one doesn't agree with Simeon Poisson, who said, "Life is good for only two things, discovery of mathematics and teaching mathematics."	4	5	all
http://tqd.advanced.org/2647/index.html	**Interactive Mathematics Online (IMO).** Great site for math teachers with plenty to do and see. Some very progressive use of Java as well as problems and activities in algebra, geometry, and trigonometry. A well-done section where you, or your students, can create your own stereograms (not sure of the math value here but good fun all the same).	4	5	7–12
http://www.napanet.net/~jlege/	**Project ARISE.** ARISE stands for Applications Reform in Secondary Education, and this site explores the adaptations of precollege/university mathematics to emphasize "real world" problems and settings for mathematical explorations. Hogan Senior High School is one of America's 15 pilot schools, and its progress makes for interesting reading. Information on courses and a program description are included.	4	5	all
http://www.scottlan.edu/lriddle/women/women.htm	**Biographies of Women Mathematicians.** This is a great and extensive collection of biographies, which vary in depth and length, of women mathematicians in alphabetic and chronologic order. Use this fascinating resource to highlight a particular mathematician each week by having students do an oral summary, create a poster, or present a short theatrical skit representing the life and times of the mathematician concerned.	4	5	all
http://www-groups.dcs.st-and.ac.uk/~history/index.html	**MacTutor History of Mathematics.** This extremely comprehensive collection of information deals with every aspect of the development of mathematics through the ages, including mathematicians of the current day, a chronologic history of mathematics, a famous curves index, a history topics index, and a lot more.	4	5	4–12
http://cleo.murdoch.edu.au/~cwatson/casio.html	**Charlie's Graphics Calculator Site.** The use of graphics calculators in schools is now commonplace, yet many teachers and students still do not realize the full power of these tools. This site reviews different calculators for use in the classroom.	4	4	9–12

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http://www.comlab.ox.ac.uk/oucl/users/johnathan.bowen/publications/ndcubes.html	**Hypercubes.** Students have trouble with two dimensions, even more with three, and now we want to introduce four! This site introduces the concept of dimensionality very well and is ideal for all teachers of math to visit. The strategies for teaching an understanding of dimensionality are well presented, and some excellent web sites and activities are provided. From here it gets very "heavy," and most will decide to proceed no further.	4	4	11–12
http://ourworld.compuserve.com/homepages/rajm/	**Robert Matthews: Probability and Spooky Coincidences.** Great site applies the principles of probability to strange occurrences that turn out to be not that strange after all. This is good anecdotal information for teachers to present to the class as an introduction to probability or for students who have a good, basic grasp of the subject and need challenging.	4	5+	4–12
http://www.learningkingdom.com/five/	**Blankety-Five Squared.** This online game teaches students how to square two-digit numbers that end in 5. Follow the step-by-step instructions, practice the skill, then take the Blankety-Five Challenge.	5	5	K–10
http://scidiv.bcc.ctc.edu/Math/infinity.html	**Counting to Infinity.** "The bottom line is that weird things can happen with infinity!" So says the author of this insightful site. It offers a brief history of infinity, followed by some links to good stories highlighting the amusing troubles infinity can produce. Good senior math debates here.	4	5	4–12
http://www.mcs.drexel.edu/~crorres/Archimedes/contents.html	**Archimedes.** As much a mathematician as a scientist, Archimedes used fundamental principles to great effect. This site presents the burning mirrors, the screw, and much more and is an excellent source of information for both the math teacher and the student looking for background information.	4	5	all
http://nilesonline.com/stats/	**Statistics Every Writer Should Know.** This site puts statistics into a context that may help teachers deliver its concepts to students. Learn all about mean, median, and percent, and check out standard deviation, margin of error, and data analysis. With lots of teaching ideas, this site is good and very useful in a review process for students.	5	5	4–12
http://www.learningkingdom.com/eleven/	**Eleven Times.** This great site has a simple objective: teach students how to multiply two-digit numbers by 11. Follow the step-by-step instructions provided and learn the trick, then practice the new skill in the Eleven Times Challenge.	5	5	K–8
http://www.sisweb.com/math/tables.htm	**Dave's Math Tables.** This site is a collection of support and problems for math teachers in such areas as algebra, geometry, trigonometry, statistics, and some more advanced topics. You can now download the site from this page, and view all the information offline, which makes this an excellent review site for teachers at most levels.	4	5	4–12
http://forum.swarthmore.edu/teachers/elem/	**Elementary School: Teachers' Place.** This is a good site for teachers of year K–5 students looking for support of their math program. It offers lesson plans, activities, and projects as well as fun sites and software applications. Teachers may wish to join some of the mailing lists this site has previewed as well.	4	4	K–5
http://forum.swarthmore.edu/alejandre/	**Suzanne's Mathematics Lessons.** This collection of web-based units of work for grade 5–12 students includes standard topics such as fractals but also some good material on magic squares, algebra, tessellations, geometry, and circle designs. These well-designed units would be good as extension work for the more able students.	5	4	5–12

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http://lonestar.texas.net/~jenicek/pentomin/pentomin.html	**The Pentominoes Page.** Pentominoes are those shapes made from different arrangements of five small cubes. They can be arranged in a multitude of ways, and they are great for establishing some spatial management skills and developing thinking skills in the area of manipulations and physical dexterity. The site deals with ways to use pentominoes and challenge students.	4	5	K–10
http://curriculum.qed.qld.gov.au/kla/eda/index.htm	**Exploring Data.** This site provides a range of topics for introducing the mathematical concepts behind statistics. Everything is here from histograms and dotplots to boxplots and scatterplots! The material is very well laid out with good pedagogical support. Sections deal with assessment, some data sets (Excel 4.0 and NCSS 6.0 Jr.), probability and hypothesis testing, and much more.	4	5+	all
http://forum.swarthmore.edu/alejandre/spreadsheet.html	**Graphs.** This excellent set of ideas and worksheets for students in grades 6–9 uses ClarisWorks to develop graphing skills. The information introduces and provides applications and data for bar graphs, pie charts, and pictograms, then leads into more complex graphing techniques using polynomial and exponential functions.	5	5	6–9
http://www.mste.uiuc.edu/reese/birthday/intro.html	**The Birthday Problem: A short lesson in probability.** This is an excellent introduction to probability for grades 3–7. Based on the probability that two people will have the same birthday in one class coupled with surveys, students get to see the predicability and the limitations of probability.	5	4	3–7
hhttp://www.ozemail.com.au/~collinsb/m_time1.htm	**Metric Time!** This must be one of the best math sites on the web—so logical and so impossible at the same time. We have metric distances, weight, and barometric pressures, why not time? Check out the metric clock. Use this excellent site to introduce the concept of base 10.	5	5	all
http://www.developer.com/dircetories/pages/dir.java.educational.math.basics.html	**Java for Math.** This site offers a collection of Java buttons and tools for math pages on the Internet and tools to use in the math classroom. Everything is here from simple Java applets delivering sample sums to complex graphing tools and applications as well as plenty of games, puzzles, fractals, and geometry ideas.	4	5	all
http://www.edc.org/LTT/ConnGeo/CP.html	**Constant Perimeter and Constant Area Rectangles.** This simple and very effective site demonstrates the relationship between area and perimeter. Java animations allow students to vary the perimeter in one direction and observe the changes in the other direction that keep the area the same. The same process demonstrates the reverse relationship.	5	4	K–10
http://www.mathmistakes.com/	**Glossary of Mathematical Mistakes.** This is a wonderful glossary of mathematical mistakes taken from media, politicians, activists, and the general population. This site provides a wealth of anecdotal examples (complete with references) of how math has been applied or interpreted incorrectly. Some are hilarious, but some are more subtle.	4	5	all
http://www.math.utep.edu/sosmath/	**S.O.S. MATHematics.** This University of Texas web site has been designed to help grade 8–12 students with their development in mathematics. Some good introductory sections are "do your homework," "prepare for a test," and "getting ready for class." The site also offers support information on a range of mathematics topics, including calculus, trigonometry, and algebra.	5	5	8–12

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Music & Performing Arts

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http://www.ed.uiuc.edu/students/cunningh/project	**Instrumental Music Teacher Resources.** This home page contains a lot of information on teaching methods, rehearsal techniques, motivation, and conducting as well as great resources on such topics as mainstreaming in music, at-risk students, gender issues, and music across disciplines. This is one of the most useful areas on the web for music teachers.	4	5+	all
http://www.yahoo.com/Entertainment/Music/Genres	A great place to start. Yahoo does well here with a **global look at music of every genre** from New Age through New Wave, Tejano, Cajun, Zydeco, and Dixieland. Check out the Disco, Folk, Blues, Metal, and Ska areas.	3	5+	all
http://syy.oulu.fi/music/	**The World Wide Web Virtual Library music site.** This is a links-only site, but the huge number of sites is very impressive. If you want information on any instrument, style of music, composer, or performer, it probably appears on this list.	4	5	all
http://www.geocities.com/Athens/2405/	**Music Education Online.** This music educators home page contains a huge number of links to other music sites as well as some good bulletin boards for music teachers to post sale items or questions to do with resources or performers and performances. There are also some online lessons to access.	4	5	all
http://www.geocities.com/Athens/2405/resources.html	**Music Education Resources.** This set of links has good summaries with each link. There are a lot of links here and they seem to be very useful. Well worth a look. A few list sites appear in this text due to the diverse nature of topics in the music education field.	4	5	all
http://www.ed.uiuc.edu/students/yyang/HTML/prj.html	**Learning Musical Elements through Listening: Resources for Guided Listening**. A great page on this topic, it is well worth a look by all teachers. The material, designed for students, consists of different strategies, musical elements, composers, and genres.	4	5	all
http://www.chepd.mq.edu.au/boomerang/songnet/intro.html	**Australian Folk Songs.** This site has more than 100 Australian folk songs with words, music, and background information on the history of each song. You can even play a QuickTime movie (if you are patient enough for it to download) and see and hear a MIDI sequence of the tune.	5	4	K–8
http://www.acns.nwu.edu/jazz/	**The Jazz Web.** A great site for jazz fans produced by Northwestern University with essays on jazz styles and some excellent hypermedia editions. Check out the jazz art as well as the jazz education and resource areas.	4	5	9–12
http://www.kids-space.org/HPT/index.html	**HOP POP Town.** This highly interactive site has been developed to help students develop musical sequences. The interface uses both live audio and Shockwave to produce a kid-friendly interface that allows students to take their creative ideas and express them musically.	5	5	K–10

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http://www.artdsm.com/music.html	**Piano on the Net.** A complete set of lessons at three levels. This site is quite formal, but the lessons are thorough and offer a good progression.	4	5	4–12
http://www.v-zone.com/tpo/	**Trumpet Player Online.** Get lessons online, methodology, sound files, trumpet news, other links, information on famous trumpet players, and even a trumpet cartoon of the month. If you are into playing the trumpet, this is the place to go.	4	5	4–12
http://www1.playbill.com/playbill/	***Playbill On-Line.*** The consummate theater home page, *Playbill* has everything from theater listings to gossip sections to travel packages for theater lovers.	5	4	all
http://www.dancer.com/dance-links	**An excellent set of dance links.** The site is divided into various sections, including modern, tap, jazz, ballet, dance companies, dance schools, and dance organizations. A manageable set of worthwhile links to explore.	4	4	all
http://www.aaronshep.com/Mark/flute/	**Mark Shepard's Flute Page.** Some tips on how to play the flute and some modern approaches, but the highlight of this site is "The Plumber's Pipe," a simple instruction sheet for making a flute from PVC pipe.	4	5	all
http://www.missouri.edu/~cceric/	**Trombone Home Page.** Trombone players are obviously keen Net players as well. A good site for the followers of this musical instrument.	5	4	4–12
http://www.classicalmus.com/bmgclassics/opera/index.html	**Classics World: Opera Treasury.** Click on *Aida* or *Julius Caesar* and get a full synopsis and explanation of lyrics. There are 25 reviews of the most popular operas. Students are starting to listen to classical music so, who knows, they may start liking opera, too!	4	5	all
http://www.acns.nwu.edu/jazz/styles/	**The Styles of Jazz.** The great highlight of this site is the graphic that shows the development of jazz, including the introduction of blues, ragtime, Dixieland, boogie, bebop, jazz funk, and so on. Very good teaching site for those teachers wanting to show how the jazz styles originated and blended to form new sounds. Very thorough and well set up.	4	5	4–12
http://www.gspyo.com/	**Education @ GSPYO.** The Garden State Pops Youth Orchestra has really gone to town to create a site that introduces musical instruments to students of all ages. You can see the instruments, hear them, and see how they are played. You can also look at a huge range of musical genres as well as lots of background material.	4	5	all
http://www.maori.org.nz/kapahaka/waiata/intro.htm	**Waiata: Maori songs.** A good selection that is added to regularly. Some songs have sound tracks. The songs range from the traditional to the more modern and represent a good selection for any classroom whether in New Zealand, America, or Poland!	4	5	all
http://tqd.advanced.org/3306/	**MusicNet: The Online Guide To Music Education.** This very extensive site has an online MusicNet encyclopedia, an excellent section on professions in the music industry, and a section on music education games and contests. You can spend hours mining this site for relevant, up-to-date information. Encourage the more senior students to use the chat and message boards. This site is very inspirational.	5+	5+	all
http://www.lehigh.edu/zoellner/quiz1.html	**Musical Instruments Quiz.** Part of a larger site you can link into, this section is very useful as a stand-alone quiz for students to attempt in their own time. Students must identify various instruments, and they can hear the sounds each one makes. Link from here to the music encyclopedia, and join the mailing list.	4	4	all

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AltaVista (general)	http://www.altavista.com/	**Yahooligans** (K–12 only)	http://www.yahooligans.com/
Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

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URL	Comments	presentation	content	grade level
http://www.u.arizona.edu/~tirwin/lap.html	**Music Learning Activity Packets.** This site offers a series of ideas for teaching music. The lesson ideas and requirements are placed into a manila envelope. The eight lessons are self-contained teaching ideas. A good concept that could easily be applied to all curriculum areas.	4	4	all
http://www.iinet.net.au/~nickl/torture.html	**The Recorder: Instrument of Torture or Instrument of Music?** This is one of those "What color is the gray horse?" questions. The site contains 30 pages of information on how not to make the recorder an instrument of torture. With 3.5 million plastic recorders made annually, this site offers welcome relief to a lot of people.	4	4	all
http://www.cowboy.net/~mharper/CML/Songbooks.html	**Children's Music List: Online Song Books.** This is an extensive list of songs available online. Some include the music. A good range from Muppet songs to Schoolhouse Rock and Christmas songs. Read the warning under The Digital Tradition Folk Song Database!	4	5	all
http://www.cnmat.berkeley.edu/~ladzekpo/	**African Music and Dance.** Some excellent sections at this site look at sacred rituals, drumming sequences, sound tracks, and links to various ensembles. A montage from CK Ladzekpo, "Sounds of Africa," is excellent. You can also do the foundation course in African Dance-Drumming!	5	5	all
http://www.kidsop.com/	**The Children's Opera Project.** Fancy having your class produce an opera that has been written for them? Try out the "Coyote and the Winter that Never Ends" or the 1998 opera "Wizard Things." The site offers a complete opera for students (grades 4–12) with everything you need to perform it at your school. Great idea and material.	5	5+	4–12
http://www.creativedrama.com/	**Creative Drama & Theatre Education Resource Site.** Wonderful teaching resources on creative drama information and links, plays for performance, book lists, and a discussion section. But best of all is the Classroom Ideas section, which offers lots of excellent ideas for all grade levels. The counter says only 300 people have visited; this site deserves far greater interest than this!	5	5+	all
http://www.countryweekly.com/	***Country Weekly Online.*** This magazine deals with all things country music, including the culture, the music, and the musicians. Interesting articles and a good source for teachers trying to provide a wide exposure to all forms of music.	5	4	7–12
http://www.commarts.com/index.html	**Communication Arts Home Page.** Communication arts deals with the use of graphic images to communicate ideas. This site provides both teachers and students with a lot of ideas on the artistic side and also highlights jobs and career opportunities. Plenty of information is here on new technologies available in this field as well as sections dealing with innovation and the *CA* magazine. Very comprehensive.	5	5	7–12
http://www.lyrics.ch/search.html	**Search for Lyrics.** In this great database, you can search for song lyrics based on either a line from a song, the artist, or the album. Great for discovering the lyrics for that song you keep humming but can't remember the words to. Quite comprehensive with more modern songs than earlier, pre-'60s lyrics.	4	5	all
http://tqjunior.advanced.org/4116/Music/music.htm	**Math & Music.** There seems to be a strong connection between success in mathematics and appreciation of and ability in music. This site attempts to confirm that link and develop the concept. The site investigates such aspects of music as pitch, rhythm, and tone and the math that underpins these musical qualities.	5	5	all

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

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http://cnet.unb.ca/achn/kodaly/koteach/	**Virtual Music Classroom.** A lot of information for both the teacher and student includes activities encouraging listening, composer of the month, music styles, and a section of resources for the teacher. These appear well done and are content based rather than just links to other sites. A good section looks at vocal health, and another on teaching kids to conduct has an immediate appeal. Research papers, music at the site, and a lot of other material.	4	5	all
http://www.jazclass.aust.com/#02	**Jazclass with Michael Furstner.** Lots of good ideas here for teaching jazz as part of the music curriculum. The site contains articles and profiles, some great introductory classroom lessons, including basic music theory, jazz theory, basic chords, blues basics, and an e-mail course on improvisation. The music library contains a range of MIDI files, and the links to support pages and sites are good.	5	5	all
http://www-personal.umich.edu/~pfa/dreamhouse/nursery/rhymes.html	**Mother Goose, Nursery Rhymes & Children's Songs.** A good collection here for the junior students. The likable feature is that the site groups the songs, poems, and rhymes into themes. Check out the "Not Politically Correct" section, if you dare. Also some good advice on reading to young audiences.	4	5	K–3
http://www.linder.com/muybridge.html	**Eadweard Muybridge: Father of Motion Pictures.** If you are looking into visual language or a study of film as a communication vehicle, this material provides an excellent insight into how it all began. Beautifully presented site shows the times and the thoughts that drove this man.	5+	5	all
http://sunee.uwaterloo.ca/~broehl/improv/index.html	**The IMPROV Page: Improvisational Theater.** This great form of theater requires both good oral language and drama skills. This site is full of ideas for the classroom and some great games to get students to loosen up and ready to participate fully. The site has suggestions for getting an improv group going, the history of this art form, and links to other sites, books, and resources. Great site. Suitable for all ages.	5	5+	all
http://www.jdhite.com/study/Clarinet/intro.htm	**A Clarinettist's Study Guide.** This study guide has seven levels and material to suit every student. The material here would constitute a complete course of study if necessary.	4	5	all
http://fox.nstn.ca/~puppets/activity.html	**Stage Hand Puppets.** A great introduction to puppetry for (grades K–4). Great ideas for puppets that are effective but easy to make and operate. Check out the 101 Dalmatian puppets, some very good performance tips, and even some ventriloquism tips. Good, fun site that encourages students who may be a bit shy.	4	5	K–4
http://www.cyberfilmschool.com/	**Cyber Film School.** A huge site with lots to offer both teachers and students. A range of articles deals with all aspects of filmmaking as well as background on how movies are made. Links go to movie magazines that deal with movie-making culture as well as film reviews. There are guides to research and information on the relationship between the viewer and the product and much more. Good sections deal with desktop movie making so all can be Spielbergs. Great site with lots of information and support for the classroom.	5+	5+	all
http://www.pageplus.com/~bigears/	**Big Ears: Online Ear Trainer.** This excellent site uses a simple Java applet to play a random interval, and the student guesses which one was played. The Big Ears applet has a range of two octaves and chooses the pitch chromatically.	5	4	4–12

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http://www.Lehigh.EDU/Zoellner/encyclopedia.html	**Musical Instruments Encyclopedia.** If you have RealAudio downloaded (http://www.real.com/), this site comes alive with the sound of music. You can click and see the instrument, check its history and current status in the music world, and hear what it sounds like. The site offers a good variety of instruments from the common to the very obscure.	5	5	all
http://www.wpi.edu/Academics/Depts/IFD/TT/Producers/	**An Illustrated & Annotated Manual for the WPI Producer.** Following a very sobering introduction, this is a great manual for all aspiring producers of theatrical productions. The online resource covers the duties of the producer, creating time lines, some good interviews with producers at the Worcester Polytechnic Institute, and some links to additional sites for support.	4	4	all
http://www.liveconcerts.com/lobbybodyframe.shtml	**Live Concerts over the Web.** Through the use of RealAudio and RealVideo, you can listen in and, in some cases, look in on concerts from around the world. No matter what your taste, this site is bound to have something for you. In the classroom, use the site to store short recordings of particular music styles and use them when appropriate.	5	4	4–10
http://www.byu.edu/tmcbucs/arts-ed/StanHome.html	**National Standards for Theatre Education.** These standards provide an excellent basis for the curriculum. Grouped according to grade and ranging from K–4, 5–8, 9–12 (proficient), and 9–12 (advanced), there are some good lesson plans here and links to fun and helpful teaching tools, improvisation ideas, and theater games.	4	5	all
http://www.firstmusic.com/	**First Music: Guide to Music on the Internet.** A generalist site that is very comprehensive. If you are looking for contemporary music to support a curriculum initiative, this is a good place to start. There are some excellent artist profiles, music Ezines, and concert information as well as a great selection of radio stations around the world organized geographically.	5	5	all
http://www.gweep.net/~prefect/pubs/iqp/	**Technical Theatre Handbook.** This very comprehensive online handbook deals with all aspects of the technical side of a major production. Great ideas can be incorporated into the school musical or taught as technical theory. There is information here on costumes, lighting, audio, the set, and every other aspect of theater you can imagine.	4	5+	all
http://www.theatreland.co.uk/ or http://www.londontheatre.co.uk/	**The London Theater.** Need to keep up with what is happening on the West End or any other theater in London? At this site, you can book tickets, read reviews, and catch up with all the news. The site is also home to a good set of links that take you on tours, complete with online maps.	4	4	all
http://www.guitarworld.com/mainstage/mainframe/code/main.html	**Guitar World Online.** Primarily contemporary guitar work from the leading rock bands from around the world, this site provides young musicians-to-be with everything they could possibly want to know or hear about regarding music news and advice in terms of "gear" as well as online lessons from the experts.	5	4	4–10
http://tqd.advanced.org/3656/html/index2.htm	**Music Emporium.** The highlight here is the section dealing with how instruments work. This excellent material is an invaluable accessory to any music program. There is a section that shows students how to compose their own music (for the more advanced MIDI students), another good section dealing with the teaching and appreciation of music on the Net, and a very useful glossary.	5	5+	4–12
http://members.aol.com/wdwjoe/disney.html	**Disney Music Page.** This simple page has a collection of MIDI files that play the various themes songs used in the Disney cartoons, films, and so on. The site is useful to introduce music to kids because it provides music they know and relate to.	5	4	K–8

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

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http://library.advanced.org/11360/	**Media Unplugged.** Excellent student-designed site looks at television, the process behind television production, and advertising and its effects. Finally, students get to create their own television broadcast using a video camera and the support this site offers. Let the Funky Rabbit take you through the process. Excellent site the whole class can use.	5	5	4–12
http://www.allmusic.com/AMG.HTML	**All Music Guide.** A general, all-purpose music/entertainment site that provides a good search tool to finding various songs, genres, and musicians on the web. It also provides a significant quantity of its own content through well-organized information and some excellent essays. Contemporary music dominates the content.	5	4	all
http://datadragon.com/education/	**DataDragon: Music Education.** Excellent music education site from the larger DataDragon site. Articles and support deal with learning to read music, listening to various instruments, music genres, a good anecdotal site for teachers entitled "this day in music," and links to other sites.	4	5	all

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Science

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http://met.open.ac.uk/vms/vms.html	**The Virtual Microscope.** Visit this site, which deals with microscopy in all its forms, for sheer joy! Great science and very interactive. Excellent site for all teachers and kids with even the slightest interest in science.	5+	5+	4–12
http://kendaco.telebyte.com:80/billband/Possibilities.html	**Integrating the Internet into the Science Classroom.** This site is great, and its possibilities are endless for it offers great ideas and samples. Often it seems the Internet is just an encyclopedia of information, but, in fact, it is a set of tools. This site highlights these different applications. One of the first sites teachers of science should visit.	5	5+	9–12
http://141.213.36.35/register/kgs99signup.html	**Kids as Global Scientists.** A range of activities here allows students to play the role of a scientist. Your school can become a KGS school and get involved with these activities. Most of the activities are climate oriented, which allows students to see the results of their global project.	4	5+	all
http://quest.arc.nasa.gov/antarctica2/index.html	**Live From Antarctica2.** Live from Antarctica2 ran from January through March 1997 and will probably be repeated. Students can experience from a distance what it is like to live and work in Antarctica. Scientists keep students informed on animal movements, the ozone hole, and astronomic information. Great project, so register early. In the meantime, take advantage of the valuable journals and other information presented.	4	5+	all
http://hou.lbl.gov/	**The Hands-On Universe.** This is a great site where students are encouraged to carry out genuine astronomic research by requesting observations through the 30-inch telescope or images from a huge 1,500-photograph database. This is great science for keen students.	4	5+	4–12
http://quest.arc.nasa.gov/livefrom/hst.html	This great site allows students to do real science in concert with the **Hubble Space Telescope.** This project will be very popular as you register and receive e-mail updates and information packages. The targets for discovery are the planets Neptune and Pluto. Original observations will be made by students (and teachers masquerading as students probably) using the space telescope. This is real science using a piece of equipment worth millions of dollars. Also plenty of photos and interesting information.	5+	5+	4–12
http://visembryo.ucsf.edu/	**The Visible Embryo.** This online tutorial deals with the first four weeks of a fetus' life in the womb. This site is really well done with wonderful pictures and text, making a great introduction to the early days of pregnancy. This is good material for a wide audience if used well.	5+	5+	4–12
http://www.icair.iac.org.nz/education/resource/homepage/homepage.htm	**Antarctica: A Resource For Teachers and Students.** This excellent site comes with lesson plans, background information, and excellent photos. It could easily become the basis for a whole science unit at almost all levels as the information is quite generic. There is also a glossary and a reference e-mail address where you can send all students' questions! A top 10 site.	5+	5+	all
sfc/newsroom/flash/flash.htm	**Flash: NASA Newsroom.** For all the breaking NASA news on its many current projects or those in the developmental stages, this is the place to visit. Short reviews lead to web sites for more comprehensive information.	4	4	4–12

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SkyLight Training and Publishing Inc.

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http://versicolores.ca/SeedsOfLife/home.html	**Seeds of Life.** This is a beautiful home page. It has some great science for all levels about seeds and their importance, how they grow, their diversity, and all sorts of other information. If you are doing any work on plants, this is a great place to start for both teacher ideas and student information. One of the top 10 science sites.	5+	5+	4–12
http://www.nasa.gov/	**NASA.** The pioneers in the use of Internet for education are still out there. This is a massive compendium of knowledge presented really well for all levels. The site is loaded heavily toward astronomy but contains some excellent sections on flight, weather, materials, and the NASA spin-offs that are the result of 25 years of research. A great site with daily updates, a meet-the-astronauts section, and more. A top 10 site.	5+	5+	all
http://www.newscientist.com	**The home page for *New Scientist* magazine.** This has to be the best overall science page on the web, offering information from *New Scientist* magazine as well as daily news articles, research news, and lots of excellent science material for both senior students and teachers. You must subscribe to this page, but it is free and well worth the effort.	5+	5+	all
http://sunsite.anu.edu.au/Questacon/	**Questacon: The National Science and Technology Centre.** Australian Science Centers offers an excellent site with some really good science for the elementary-aged science student. Join in the solar car challenge, head off to the farthest reaches of space, or get into the hands-on (virtual hands, that is) activities. This site has been featured in the top 100 best sites anywhere in the world. A top 10 site from Australia.	5+	5+	all
http://www.the-scientist.library.upenn.edu/	***The Scientist.*** This newspaper is for those involved in the life sciences. Updated each week, the newspaper contains all the week's stories that link the sciences with everyday events. Very well done. Good background information for both teachers and older students. High school students could review this site each week and report back to the class on three of the week's top stories. Recommended reading for all senior life sciences teachers.	5	5+	7–12
http://shuttle.nasa.gov/	"Not another **astronomy** site," you may well declare, but NASA Shuttle Web is an excellent site for a class project to follow a mission. Join the team a week before lift-off, and have a group of students report to the class each day on what is happening and what the scientists are doing in space. Get students to cut out articles from newspapers and magazines and write a "mission report" after the return to Earth of the shuttle. Updated daily!	5	5	4–12
http://www.covis.nwu.edu/	**Learning through Collaborative Visualization.** No, this is not a rainbow connection but an excellent science site in which projects attempt to replicate the way authentic science is conducted. This is the future of how a lot of science will be taught—using a multimedia notebook and scientific visualization software. This is a very clever concept; we could conduct trials here, then report back to professional groups for discussion.	5	5	4–12
http://sln.fi.edu/planets/	**An Inquirer's Guide To The Universe.** This is a fresh approach to astronomy using a student-directed approach to learning. Imaginary planets await discovery, and students can ask questions that prompt information to come online. A great way to use the Internet as a learning center. Very suitable for elementary through junior high students.	5	5	K–8
http://bang.lanl.gov/solarsys/	Views of the Solar System. This **educational tour of the solar system** contains 220 pages of information as well as 950 full-color pictures and animations—almost 1 gigabyte of information at your service. A great glossary is attached for reference, and the information is at a level for teachers and for students from grade 6 up.	5	5	6–12

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http://www.sciencedaily.com/index.htm	***ScienceDaily* online magazine.** Have students visit this site regularly and make a presentation to the class based on articles that appear. Material is of a good level for upper elementary through high school, although the younger students may need some vocabulary assistance.	5	5	4–12
http://www.ilcnet.com/~nutrition/mmcell.htm	**Your Body and Nutrition.** This is a commercial pharmaceutical site with an excellent education section that looks at the inner workings of a cell. It highlights each of the major organ cells and supplies very relevant information on each topic. Very worthwhile graphics show the nature of the cell and the relationships among the various organ cells.	5+	5	4–12
http://groundhog.sprl.umich.edu/index.html	**Weather Underground.** This great site is written specifically for students. Students can do writing activities based on storm watching or visit the WeatherGlobe or WeatherNet. It is the most visited university site in the world. Great material.	5	5	all
http://seds.lpl.arizona.edu/nineplanets/nineplanets/nineplanets.html	**The Nine Planets.** This great tour of the solar system is from a source other than NASA, and it is done really well. All the pictures, facts, and amazing discoveries are presented in an easy-to-read, easy-to-follow format. One of the most visited sites on the web.	5	5+	4–12
http://www.cais.net/publish/	***Science and the Environment.*** This very clever site integrates the commercial site with the educational in an electronic magazine (Ezine) for high school students. Some excellent material here comments on international environmental issues. Each issue contains summaries of 80 articles that have appeared in more than 500 magazines and newspapers. The summaries are concise and loaded with photos and graphics.	5	5	9–12
http://www.eia.brad.ac.uk/btl/sg.html	**Stars and galaxies.** This is a great introduction to the universe for secondary students. Listen to audio clips and work through topics such as the origin of the universe, how stars develop, where their energy comes from, and the life cycle of stars. This site includes excellent pictures of galaxies and their development.	5	5	9–12
http://www.sciam.com/	The electronic home of ***Scientific American.*** This venerable magazine is now available electronically, and a fair bit of it is available for free. The journal is a great institution, and even though most understand only the first two paragraphs of any particular article, one gets a sense of being in touch with the leading edge just by visiting the site.	5	5	9–12
http://pdg.lbl.gov/cpep/adventure.html	**The Particle Adventure.** This interactive tour of the inner workings of the atom and the tools used in the discovery of its particles would suit a self-directed, learning center package. Excellent site for introducing atomic structure.	5	5	7–12
http://fly.hiwaay.net/~palmer/motor.html	**Beakman's Electric Motor.** This great site contains a straightforward set of notes and illustrations looking at how to construct a working electric motor from very limited and easy-to-obtain materials.	5	5	9–12
http://www.azcentral.com/depts/azscience/sunchart.html	**Here comes the Sun.** Not the Beatles version but a web site dealing with the sun, including updated photographs each day. Watch as they change from day to day. We actually live in a dynamic universe, and this is a good site to demonstrate to students the subtle changes that occur, often without us realizing.	5	4	4–12
http://www.bocklabs.wisc.edu/virusviztop.html	**Institute for Molecular Virology: Visualizations of Viruses.** Can a deadly virus really look this amazing? This site is great with its fully rendered images of a variety of viruses. The site also has some topographic maps of viruses and viral proteins for the very keen biologist.	5+	4	10–12

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http://www9.biostr.washington.edu/da.html	**Interactive Atlases: Digital Anatomist Program.** Say that again! Yes, here you can find 2- and 3-dimensional views of various parts of the body. Print these off onto OHTs for an excellent resource. There are images here of the brain, heart, lungs, and knee among others. Excellent senior or college science resource.	5	5	9–12
http://athena.wednet.edu/curric/oceans/ocolor/index.html	One of the excellent units available through the Athena home page, this is a terrific example of using a theme to teach science concepts. The theme of **Ocean Color Viewed From Space** teaches concepts as varied as food chains, energy transfer, satellite imagery, and geography. Teaching science through a strong context is good pedagogy, but remember to meet curriculum objectives.	5	5	9–12
http://www.aaas.org/ehr/kcsuper.html	**Kinetic City: A Science Adventure Show.** This is the web version of the Australian radio show. Science mysteries are solved by young people who speed around the world on their super train (ALEC). Hands-on activities to do at home or in school appear. You can download the RealAudio clips and hear the radio version as well.	5	5	K–8
http://webdirectory.com/	**Amazing Environmental Organization Web Directory is a huge (more than 1,000 links) site all about the environment.** This site is not only large but well organized, so it is easy to get around. If you are doing any work at any level on environmental science, you will find what you are looking for here.	5	5	all
http://www.jpl.nasa.gov/	**The home of the Jet Propulsion Laboratory (JPL).** This is the lab that created Voyager and most of the robotic instruments that are hurtling through space taking snapshots of the planets. Great material here and lots of it. Teachers need to have a look through here first before letting students loose as the quantity of graphics can take some time to work through.	5	5	all
http://whales.ot.com/	**Whale songs.** Why do whales sing, and are they really talking in another language? Come here and find out. Listen to some songs, and join scientists as they try to track whales through the Azores. This site has been developed specifically for teachers and is useful to teachers of all ages of students.	5	5	all
http://volcano.und.nodak.edu/	**Volcano World.** This University of North Dakota information page on volcanoes is introduced by a comic character who sets the tone. Sections include Ask a Volcanologist, learning about volcanoes, volcano news, and much more. Excellent material for students and good links all over the world. The material is aimed at all levels.	5	5	all
http://www.exploratorium.edu/	The home page of the **Exploratorium**, San Francisco's interactive science museum. This huge site has plenty of links with good science. One link takes you to the Learning Studio where you can do a cow's eye dissection. This and other links make this a site well worth visiting.	5	5	all
http://www.nj.com/yucky/worm/	**Worm World.** Worms are a great topic to study at any level, and this very comprehensive site looks at all aspects of the life of the worm. Wendell the Worm introduces you to his contemporaries such as Leech, Tapeworm, and Planarian then guides you through sections on earthworms as recyclers, their body parts, and even a worm art gallery!	5	5	all
http://whyfiles.news.wisc.edu/	**The Why Files** (no relation to the "X Files"). This excellent site looks at recent issues and asks "Why?" Presented really well, the science here is suitable for all levels, and the page is updated each week. Once again, this is a good site for the weekly science reporter to look at and present a report to the class.	5	5	all
http://www.owu.edu/~mggrote/pp/c_frames.html	**Project Primary.** A collection of college professors have gotten together to create lesson plans for teachers of elementary-aged students. The lesson plans are broad and idea-based rather than detailed, step-by-step lesson plans. They provide a good base from which teachers can create their own plans. Excellent ideas and good science although the level may be a bit high for some.	4	5+	K–8

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AltaVista (general)	http://www.altavista.com/	**Yahooligans** (K–12 only)	http://www.yahooligans.com/
Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

URL	Comments	presentation	content	grade level
http://www.sln.org/	This, the home of the **Science Learning Network,** has some excellent complete units of work.	5	5	all
http://earth.simmons.edu/	**EnviroNet.** This international project involves students from around the world in environment-based projects. Projects include InsectWorld, the Ozone, and BatNet. A range of other collaborative projects all sound excellent. Just check dates for when projects begin and end, and build them into your program. Also worth a look is WhaleNet, a project dedicated to whales and their behavior.	5	5	all
http://www.gullivermedia.com.au/frameset5.html	**Australian Wildlife.** This wonderful site moves from the various ecosystems of Australia to displays of the animals and plants that make up the ecosystems. Areas range from mangroves and rain forests to arid regions and reefs. Lots of excellent thumbnail photos to select for full/half screen versions. Excellent site.	5	5	all
http://www.ncsa.uiuc.edu/Cyberia/Expo/	**Science for the Millennium.** This is an online exposition of science teachers will need/use as the millennium approaches. This very graphic and well-organized site is a great introduction to the areas of science the curriculum is moving toward. An Information Center, Pavilion of Science & Industry, Pavilion of Collaboration, Pavilion of Computation, and the Online Science Theater all provide excellent material.	5+	5	all
http://www.nature-net.com/bears/cubden.html	**The Cub Den.** This good site for younger students is all about bears, including facts about bears, a photo gallery, and books about bears.	4	4	K–8
http:// www.nature-net.com/bears/	**The Bear Den.** Information on all the various types of bears, where they can be found, their diet, and any other information students might ever want to know. Plenty of conservation advice and photos as well. A general site but one that is done well.	5	4	all
http://ericir.syr.edu/Projects/Newton	This is the **Newton's Apple home page.** "Newton's Apple" is a series of science programs on public television, and this home page has a wealth of information to support the programs. It contains a huge number of stand-alone units complete with background information ideas for experiments and suggestions. The show is in its 15th season, and the site has years of backdated worksheets plus this year's offerings.	5	5	all
http://www.fws.gov/r9endspp/endspp.html	**The Endangered Species Home Page.** This site has great material, presentation, and background information. Look at numerous programs being implemented to save a whole range of species from insects to bears to flowering plants. If you are doing any work on food webs/chains, ecology, or populations, this site is well worth a visit. This is also a great site for elementary school students.	5	5	all
http://www.surrey.ac.uk/~ch43am/science/	**Science Made Stupid.** Do not be put off by the title; this is an award-winning site and for good reason. This is excellent science that examines the scientific process, introducing students to both inductive and deductive scientific processes.	5	5	all
http://www.mungopark.com/199708/contents.asp?issue=199708	**Dinosaur Fossil Hunt.** This great site explores an archeologic expedition from looking, finding, and extracting to the technology behind the expedition. Lots of background information deals with why the dinosaurs died out, the role of the paleobiologist, and much more. Very comprehensive and very well-presented site for all levels.	5	5	all

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

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http://www.uq.oz.au/nanoworld/virtual.html	**The Virtual Electron Microscope.** This Australian facility is excellent and in the growth stage. Having access to machines such as this is wicked. Great resource for the classroom.	5	5	all
http://www.jasonproject.org/	**The Jason projects investigate the theme of water**, in particular, oceans. Every four to six months, a new project begins, and students/schools can register and receive e-mail and visit web sites that support the project's objectives. The site describes the yearly plans for each project, which assists in integrating these units of work into the curriculum.	5	5	all
http://archnet.uconn.edu/	ArchNet: WWW Virtual Library for Archaelogy. For any group looking at **ancient civilizations** whether through the eyes of science or social studies, this is a must-visit site. Some excellent material for straight curriculum support as well as general interest. This is a very graphic site, so be patient or select the limited graphics option. Material here for all levels of the curriculum.	5	5	all
http://www.opticalres.com/kidoptx.html#StartKidOptxl	**Optics for Kids.** This is a commercial site but one with good information and a subtle selling message. The unit looks at the basics of light, controlling light through lenses and mirrors, and an introduction to lasers. Other areas cover answers to commonly asked questions, careers in optics, and some good references to books and other web sites.	4	5	9–12
http://www.stemnet.nf.ca/~mwhitt/whales/whales.html	**Whales: A Thematic Web Unit.** Expect to see more of this sort of presentation in the future. This is an integrated, cross-curricular unit on whales, involving science, language, math, social studies, and critical thinking exercises. An excellent site with lots of good information, worksheets, concepts, and starters for lessons. If you want to write your own material, this site is a good model.	5	5	all
http://solstice.crest.org/	**Solstice: The Center for Renewable Energy and Sustainable Technology.** This self-explanatory site looks at the variety of alternative energy sources and issues surrounding these technologies broken down in three areas: Energy Efficiency, Renewable Energy, and Sustainable Living. A very thorough site.	4	5	8–12
http://www.westegg.com/einstein/	**Albert Einstein Online.** This very comprehensive set of links provides an excellent review of Einstein's life and work. Everything is here from Einstein and his thoughts on science and religion to a discussion with Einstein on the epistemologic problems in atomic physics.	4	5	9–12
http://www-hpcc.astro.washington.edu/scied/scihist.html	Very few lists of sites appear in this text as they are always an unknown, but this list is very good. The **History of Science list** contains only 13 sites but ranges from Paracelsus to Einstein. The Einstein Bohr dialogues are here as are Galileo and the Jesuits.	4	5	9–12
http://www.yorku.ca/eye/cover.htm	**The Joy of Visual Perception.** This great web-based book presents insight into how we see what we see and does so very well. In more than 20 chapters, the book highlights the various aspects of sight from color to distance perception. This book provides an excellent source of information for the teacher who wants to demonstrate both the complexity and the beauty of the sense of sight.	4	5+	9–12

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http://quest.arc.nasa.gov/	**Quest: The NASA K–12 Internet Initiative.** Like most of the NASA sites, this is very well done. Online interactive projects and plenty of resources for assisting teachers are here as well as some great teacher training opportunities.	4	5	K–8
http://netvet.wustl.edu/ssi.htm	**The Electronic Zoo.** This huge database of linked sites is based on animal information. It is very well organized and covers every possible animal. For the elementary level, the animals are broken into familiar rather than scientific groups, such as cows, dogs, cats, and so on. If you need background as a teacher or if you want students to do some searching, this is a good place to start.	4	5	K–8
http://www.globe.gov/	GLOBE is an international program seeking to increase **awareness of environmental issues** through sharing local data and e-mail access to scientists working throughout the world. More than 2,700 schools are involved in the GLOBE project, and it is well resourced. A good program for students of all ages.	4	5	all
http://covis.atmos.uiuc.edu/guide/html/elementary.html	This excellent **weather** site is designed specifically for elementary science students. Great resources for teachers and simple but good science underpinning the ideas presented. Worth a look.	4	5	K–8
http://www.uvm.edu/whale/whalehome.html	Charlotte, the Vermont whale. This wonderfully informative and well-constructed site looks at the discovery of a **fossil whale** in Vermont. Written in a story style, it describes the discovery and the process of science very well. Excellent for elementary-aged to grade-10 students.	4	5	4–10
http://www.beakman.com/	**You Can with Beakman & Jax.** These two cartoon characters from the well-known show present science very well. Click on Jax's nose to find out all about mucus or on his feet to see why they smell. This is very popular science and would make a good question-and-answer-style learning center.	5	5	4–12
http://www.ex.ac.uk/~gjlramel/welcome.html	**Gordon's Entomological Home page.** This is a great site for elementary school students. It covers insects and bugs with plenty of pictures, good information, and an identification section.	4	5	K–8
http://www.usgs.gov/education/living/index.html	**Part of the U.S. Geological Survey Learning Web,** this site has some really good science sessions such as "Where does your household water come from?" or "How do you prepare for volcanic eruption?" or "Testing Radon Gas in the Home." Well-prepared material appropriate for grades 2–8.	4	5	2–8
http://jean-luc.ncsa.uiuc.edu/Exhibits/	**Numerical Relativity Exhibitions.** Do not let the title put you off this excellent site. Those with a physics background or sheer curiosity shouldn't pass these excellent exhibits, which use some great visuals to explain specific aspects of general and special relativity. Black holes, worm holes, and gravitational waves all come alive here.	5+	5	10–12
http://www.thewildones.org/	**The Wild Ones.** This site is dedicated to the preservation of the wildlife in danger of extinction. There are special units of work and support notes for teachers as well as a membership program individuals or the school can join. Newsletters, magazine style articles, and scientific reports (at the appropriate level for ages 7–14) all make for an excellent site full of very relevant and directed information.	5	5+	2–9

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http://www.mcn.org/ed/cur/liv/ind/birds/	This page, put together by students, is a good example of what students can achieve as well as a very useful teacher resource. The topic, **Birds of a Feather**, describes how 1st-graders used the Internet to study birds. This is a good site for elementary-grade teachers to look at and see how teacher Jessica Morton used the Net to teach this topic.	3	5	K–8
http://commsun.its.csiro.au/	**CSIRO,** the Australian scientific community's research agency, has a great home page for both science and technology. Students should check out the Double Helix Science Club, and teachers can keep up with scientific advances down here in the Antipodes. There are also quite a lot of science fair ideas as well as links to other science sites.	5+	5	9–12
http://nyelabs.kcts.org/	Welcome to **Nye Labs Online with Bill Nye the Science Guy.** Enter the lab and be prepared. This is a great site for all aspiring scientists to explore. As well as being good fun, it contains some great science, too. All ages welcome, but it helps if you can read.	5+	5	all
http://spacelink.msfc.nasa.gov/	**NASA Spacelink.** The Spacelink program has been going for some time, and the electronic version is excellent. Plenty of projects as well as photos, news, and instructional material appear. If you have a project dealing with space at any level, this is a great site to visit.	5+	5	all
http://www.iconos.com/toolsbone.html	Fancy a bit of **paleontology?** Then this is a good introduction. The site requires Shockwave to run (which you are guided through downloading) but is worth the wait. Amateur paleontologists can then put together their own Diplodocus. A good interactive site that introduces younger students to dinosaurs and what they ate and how they lived. Very entertaining.	5+	5	all
http://marple.as.utexas.edu/~WebSci/	**WebScience.** In this great site, students join Roger Stryker's 5th-grade science class and contribute to their global science projects. There are lots of projects, and this is a great way for students to join the global community and make friends.	5+	5	4–8
http://www.att.com/microscapes/	This site consists of **a large number of images taken from powerful microscopes**, which visitors can view in large or small format with detailed captions explaining the images. Captions are more suitable for senior science students. Don't expect to see images you might see with a school microscope.	5	4	4–12
http://www.ucmp.berkeley.edu/trex/trexpo.html	**Tyrannosaurus Rex.** This very comprehensive site covers the exposition at the University of California Museum of Paleontology. Excellent material on T. Rex covers both the skeleton that was collected and how the dinosaur lived all those millions of years ago.	5	4	4–12
http://www.npr.org/programs/sfkids/	**Science Friday Kids Connection.** A great science site for kids based on the National Public Radio program. Some great material here could easily form the basis of a program in any elementary school (and even junior high). The site is well laid out with plenty of content.	5	4	9–12
http://www.astro.uva.nl/michielb/sun/kaft.htm	**The Virtual Sun.** A great site dedicated to the investigation of the sun. This is a high-tech site, and with the appropriate plug-ins (provided and very well explained how to use), you can journey through the sun and even watch the sun swallow up the earth. (You'll have to wait a couple of billion years for the real thing!) Great site with a lot of information and superb presentation.	5+	5+	all

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URL	Comments	presentation	content	grade level
http://www.nj.com/yucky/	Yes, this is the **Yuckiest Site on the Internet**, which may not sound like much fun, but it's great if you like cockroaches or if you are studying insects. Great material here for elementary school students, and great pictures will stimulate much comment. As well as being good fun, this site contains some great science.	5	4	K–8
http://www.goals.com/	If you want to experience exhilarating scientific adventure without leaving home, this is a good place to start. The aim of this page is **"to intrigue you with virtual field trips, travel, adventure, science, technology, and nature."** You can join and keep in touch with a range of scientific adventurers as they set out to do everything from completing the world's first solo row around the world to living in the Antarctic. A good page for elementary classes to use for reporting once a day.	5	4	all
http://www.madsci.org/	**The Mad Scientist Network.** This is a collection of scientists around the world who are happy to answer your every question on science. Most have a medical background. Excellent, swift service.	5	4	all
http://www.uq.oz.au/nanoworld/nanohome.html	This is a great graphic site, so be prepared for some very large files (up to 300K per picture), but they are worth the time. This site is run by the **Center for Microscopy and Microanalysis** at the University of Queensland. This $6 million facility has made some of its work available to educators, and you can download pictures of everything from insects to samples of metals under intense magnification. This is really a general interest site but well worth a look.	5	4	all
http://cvs.anu.edu.au/andy/beye/beyehome.html	**Look at the world through the eyes of a bee.** B-EYE is an excellent site to introduce the study of sight. This excellent look at something that most of us have never considered is presented for students at their level. Good stuff.	5	4	all
http://www.cs.brown.edu/people/oa/Bin/skeleton.html	**Click the Bones and They Will Speak. A human skeleton** tells the names of the bones when you click on them. This is a useful site to download entirely onto the hard drive and use as a learning center. Very cute.	5	4	all
http://www.seaworld.org/	**Sea World.** This exceptional site contains a wealth of information and everything from animal quizzes to fast facts about animals. Also included are educational resources, career information, and conservation information. This site would be a good learning center for elementary school students and has some general value for grades 6–10 in regard to whales and conservation.	5	4	all
http://users.aol.com/murrk/	**Forensic Science Web Pages.** What a great way to introduce science at the beginning of the year. This site provides an excellent context for students to investigate basic scientific inquiries. The site takes you through the basic principles of how the police find their man!	5	4	4–12
http://www-dmse.mit.edu/wom/	**The World of Materials.** This site provides a good breakdown of the various classes of materials becoming everyday items. It investigates ceramics, semiconductors, polymers, and metals and explains their chemical make-up and properties.	4	4	4–12
http://science-education.nih.gov/nihHTML/ose/snapshots/multimedia/ritn1.html	**Research in the News.** Science and technology are propelling our society into whole new directions with unrelenting speed. New challenges can be met only if the population understands the implications of this research. This site presents the leading edge of information and research as they apply to society. Excellent material. With topics such as Video Game Epilepsy, Images of Dyslexia, Prions, A Cloned Sheep Named Dolly, and many others, this is an excellent research site for both teacher and student.	5	5	8–12

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http://www.wwfcanada.org/facts/whales.html	**Whales** seem to be a very in-vogue science topic, so this site from World Wildlife Fund Canada makes a great one for reference material and for students to try out their skimming and scanning. It contains a lot of links and a lot of good information.	5	4	all
http://www.lbl.gov/MicroWorlds/	**MicroWorlds.** Using the **Advanced Light Source** at University of California Berkeley labs, researchers present a very user-friendly look at materials science. Great pictures and some excellent background on the structure and surface composition of common materials.	4	4	9–12
http://www.utenn.edu/uwa/vpps/ur/ut2kids/default.htm	This is the **Science Bytes** home page where scientists at the University of Tennessee present information for young scientists about subjects they are involved in. Students can e-mail the scientists for more information and ask questions. I was impressed with the fact that the scientists had actually managed to write at a level that I understood so most 7 year olds will find the information very accessible. A good place for teachers to visit every now and then to find good information.	4	4	4–12
http://www.astr.ua.edu/4000WS/4000WS.html	**4000 Years of Women in Science.** This is a great site to research the contribution women have made to science. This site includes women other than Marie Curie. Not only can you check out biographies and statistics, but you can check out other linked sites such as Women of NASA, Women in Science at Woods Hole Oceanographic Institute, and many other similar sites.	4	4	all
http://www.webcom.com/~iwcwww/teachers_kit/learn.html	**Whales of the World.** This huge site devoted to whales has 11 activities all designed for use in schools. Teacher support material is all provided. Great site for grades K–10, particularly.	5+	5	all
http://zebu.uoregon.edu/	**The University of Oregon Physics Department.** This is what all University home pages should look like. You can complete a degree in physics online. This material is excellent, the notes are very useful for any senior physics teacher, and you can even take exams! The site provides separate links to astronomy, geography, and geology as well as a pile of physics questions and much, much more. You will return regularly to this very useful site. A top 10 site.	5+	5+	9–12
http://pdg.lbl.gov/cpep.html	**The Contemporary Physics Education Project.** This nonprofit organization produces some excellent resources on matter and energy, and this is a great site. In particular visit "The Particle Adventure," an interactive discovery tour of the structure of the atom. You can also order some great posters and online information. A top 10 site.	5+	5+	9–12
http://www.cern.ch/pdg/cpep/other_sites.html	**Particle Physics Education Sites.** Anything you need to know about the state of play in particle physics. There is also an excellent series for grades 10–12 introducing particle physics. Read about the discovery of element 112, or catch up on other press releases. A good site to visit once a week and have a student report back to the rest of the class. It adds some reality to their studies, and the site is a real motivator for students to pursue their physics studies.	5	5	9–12
http://www.fi.edu/earth/	**EARTHFORCE.** This great site highlights the enormous power produced by the tectonic forces that are slowly moving the continents around the surface of Earth. The site details where these forces come from and the results we observe on our planet. And if you think nothing happens near you, check out the EarthAlert diary that provides daily updates of geologic events around the world. We really do live on a dynamic Earth.	5	5	5
http://KidsHealth.org/parent/healthy/eyeshock.html	**How the Body Works: The Eye.** This is an excellent animation of how the eye works. Download the site and use it in the classroom to show the process from light reception to the brain processing the information into images at a spectacular rate. Download Shockwave (free) from the site if you do not have it already.	5	4	5

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http://www.soton.ac.uk/~plf/Scl-Journal/	***Scl-Journal.*** This student-produced journal of science articles is very well edited, and the articles are excellent. This site also has a noticeboard where you can list a question, and other students provide answers. Great idea and good quality information.	4	5	all
http://www.chemistry.mcmaster.ca/faculty/bader/aim/	**Theory of Atoms in Molecules.** For students in grades 11 and 12, this site could be a real eye-opener. Very well-written material looks at "What is an atom?" "What is a bond?" and quantum mechanics at the atomic level.	4	5	9–12
http://www.bluecares.com/good/body/	**The Blue Cross and Blue Shield Body Atlas.** Excellent atlas of the body for students to explore and for teachers to use for showing how the body interrelates. You can focus on an individual organ and print out some great labeled cut-aways, or you can look at entire systems such as the muscular or arterial systems.	5	5	all
http://www.pbs.org/wgbh/pages/nova/topgun/	**Top Gun!** This is the support site to the PBS NOVA program, but it is also a stand-alone site to learn about the effect of G forces on pilots as well as what it is like to be in the cockpit (some good video sequences here).	5	4	4–12
http://www.teleport.com/~dstroy/froglnd.shtml	**Frogland.** Leap into sections such as weird facts, how to look after frogs, a froggy coloring book, frog jokes, and even a frog art gallery. This site is ideal for all grade K–8 students. Would make a great learning center or research depot.	5	5+	K–8
http://quest.arc.nasa.gov/project/jupiter.html	**Online from Jupiter.** Brilliant presentation from NASA uses the data the Galileo mission is returning to Earth. In late December 1995, the Galileo probe plunged through the atmosphere of Jupiter and sent back enormous amounts of data. The Orbiter continued to orbit the planet, sending additional data on the planet and its moons. Huge amounts of information here allow a compare and contrast exercise between Earth and Jupiter—a considerable improvement on the traditional generalist space topics.	5+	5+	all
http://www.servtech.com/public/wkimler/	**The Physics Connexion.** This is a great site for physics teachers with a sense of humor. Check out the 1850 physics textbook as well as the physics humor, a very extensive collection of problems (complete with worked answers), Physics Phacts, and a section dealing with tricks to perform with the help of physics.	5	5	9–12
http://www.cnn.com/TECH/9707/04/pathfinder.pics.color/index.html	**Pathfinder Image Gallery.** When Pathfinder first landed on Mars and sent back images of the surface, the world sat mesmerized. The images were clear and showed surface features similar to those in the deserts of Arizona. The images and background information are here.	5	4	all
http://science-education.nih.gov/nihHTML/OSE/snapshots/multimedia/pds1.html	**People Doing Science.** What careers are available for students interested in science? The term *scientist* is simply too vague. There are huge opportunities in the work place for those students who show a talent for investigative science. This site presents a good selection of careers and the sort of work that these people do for a living. Very good motivational material. Have students investigate each career, contact someone who has this position and conduct an interview, and report back to the rest of the class.	5	5	8–12
http://www.tidusa.com/PEHP2000/Planet_Earth/map001.htm	**Planet Earth.** Huge site dealing with every aspect imaginable on this broad topic. This will become the source of information on a host of teaching concepts for many geology teachers for it covers every possible subset of this subject as well as geographic areas and resources.	4	5+	all

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http://www.sci.mus.mn.us/sln/tf/	**The Thinking Fountain.** This is one of the best and most comprehensive science sites on the Net. Aimed at grades K–5, this site will provide hours of scientific investigation. Topics follow themes. You must view the Mind Maps section. Excellent process approach to science.	5	5+	K–5
http://octopus.gma.org/surfing/human/index.html	**Human Impact.** From the Learning from Satellites series, this set of lesson plans and backgrounders deals with the effect of humans on ecologically sensitive areas, discussing such topics as the ozone layer, oil spills, and infestations of organisms into new environments. Excellent material here for all levels.	5	5	all
http://www.tower.org/disease/animals.html	**The Virtual Safari.** In this collection of sites, you can travel to look at various animals through video cameras aimed at fish, an iguana, a piranha, and an eel among other animals. Also a good collection of herpetologic (amphibians and reptiles) sites, insects, and aquariums. This is a good site to use to practice scanning and sifting of information or for a comprehension exercise.	4	5	all
http://www.naturalia.org/ZOO/welcome.html	**Zoo in the Wild.** This site provides a great collection of photographs of all sorts of animals, particularly for elementary school students. A selection of African mammals and birds and, as this is an Italian site, plenty of Italian mammals and birds, which makes a nice change from just animals of South America or Africa.	4	5	K–8
http://octopus.gma.org/surfing/antarctica/index.html	**Antarctica.** This excellent set of lesson plans looks at the issues and science from this frozen continent. Topics are Coping with the Cold, Chick Die-Off, Penguin Adaptation, Blubber Glove, Changes in Antarctic Ice, Creating Plankton, and Salt Concentration. Each lesson would make a great learning center. Very informative.	5	5	all
http://TheEpicenter.com/	**EPICENTER: Emergency Preparedness Information Center.** If you are doing a unit on disasters or disaster management, this site is excellent. This center provides up-to-the-minute advice on how to prepare for and cope with disasters of all kinds. There is a very good set of disaster survival audio clips available via RealAudio. Lots of information here.	5	5+	all
http://www.earthwaves.com/quake.html	**Susan Rosenberg's Quaking Home Page.** The highlight here is a world map showing the location of the most recent large quakes. Not surprisingly, they are all on plate boundaries. This site also has an excellent link to a 3-D view of the East Pacific Rise showing the localized hot spots. Great geology for the older students here. Check out "How Safe Is Your Home?" also.	4	5	4–12
http://www.5tigers.org	**The Tiger Information Center.** The remaining five subspecies of tiger are in danger of disappearing, and this site is dedicated to preserving the species through education. There is lots here for all ages from puzzles and quizzes to ecology and research news.	5	5	all
http://tqd.advanced.org/3120/main_content.html	**In a World of Order . . . CHAOS Reigns!** Chaos theory is one of the most important advances in science, but where can you get a sane, well-executed explanation of what it is and its implications? Look no further. This site sets out the chaos theory concepts and ideas extremely well with some great examples.	5	5	9–12
http://www.sonic.net/bristlecone/intro.html	**The Ancient Bristlecone Pine.** At 4,764 years of age, these trees are older than any other living thing. How they got to be so old and why they can live so long are mysteries this site starts to unwind. Great science for all ages. Use the site as an introduction to discussions about time lines, epochs, the changing Earth, and much more.	5	4	all

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AltaVista (general)	http://www.altavista.com/	**Yahooligans** (K–12 only)	http://www.yahooligans.com/
Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

URL	Comments	presentation	content	grade level
http://www.itdc.sbcss.k12.ca.us/curriculum/ozone.html	**The International Symposium on Environmental Issues.** This great, made-for-teachers site from Australia looks at whether a relationship exists between the ozone layer and phytoplankton. There are a good set of notes for the teacher, an excellent layout of the task, and a great introduction to how each of the sciences contributes to the process of discovering a relationship. There are also support information areas, skill development sessions, and support links.	4	5+	9–12
http://www-wilson.ucsd.edu/education/samplegateway.html	**Welcome to the World of Physical Chemistry.** This site is full of excellent OHP slides for teachers of physical chemistry/physics. Themes deal with Air Pollution, Quantum Mechanics, X-Ray Diffraction, and Spectroscopy. This is very much a site for grades 11–12 but a great resource.	5	5	10–12
http://octopus.gma.org/surfing/weather/index.html	**Weather.** This is an excellent set of lesson ideas and practical experiments for the science class. Find out about Detecting El Niño, Hot Spots (volcanoes), Making a Volcanic Eruption (excellent practical here), Volcanic Dust, Tracking SO_2 from Mt. Pinatubo, and the Student Weather Network. Well-presented and very practical ideas and material.	5	5	all
http://www.drscience.com/	**Ask Dr. Science.** Excellent site! "There is a thin line between ignorance and arrogance," Dr. Science says, "and only I have managed to erase that line." This comment sets the tone for this web page version of the syndicated radio show. Ask Dr. Science anything you like, check up on what other people have asked him, and find out what Duck's Breath Mystery Theater is. All this and more at this very informative and entertaining site.	5	5	all
http://micro.magnet.fsu.edu/index.html	**Molecular Expressions.** Trying to get the idea of scale across to students is very difficult because "small" means so many things to children. This site brings out the complexity and artistry of everyday objects through the atomic nature of matter. It is from this perspective that this site is so powerful . . . scale starts to take on meaning. Included here are DNA material, ice cream, moon rocks, flavors, hormones, and much more.	5	5	all
http://www.isgs.uiuc.edu/isgsroot/dinos/dinos_home.html	**Dino Russ's Lair.** This excellent site covers every aspect of paleontology and the world of the dinosaurs. It has information on "digs" taking place around the world, exhibits, and information on dinosaurs and their contemporaries.	5	5+	all
http://www.batcon.org/	**Bat Conservation International home page.** An international society dedicated to bats. After visiting here, you just want to take one home. Bats are not blind and not mice with wings, and they have a right to protection. Check out the Educators Activity Book, download and listen to the bat calls, and check out those ears! The bat quiz is at http://www.cccoe.k12.ca.us/bats/quiz.html	5	5	K–8
http://www.pbs.org/wgbh/nova/madcow/	**The Brain Eater: Mad Cow Disease and Prions.** A rather sensational heading but true enough. This NOVA Online site looks at food safety, how science copes when things go wrong, and a good debate on the existence of prions (microviruses).	5	4	9–12
http://wwwuky.edu/Agriculture/Entomology/ythfacts/entyouth.html	**Katerpillars (& Mystery Bugs).** A site from the University of Kentucky's Department of Entomology (spelling and all), that has some excellent sections. Some of the highlights here are the Lifestyles of the Beautiful and Bizarre, The Good, the Bad and the Strange, Mystery Bug, and Bugfood. Excellent site highlights the unusual aspects of the bug world.	5	4	K–10

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http://falcon.cc.ukans.edu/~jbrown/bugs.html	**Bugs in the News.** Cute animation and some excellent resources here. Great section "What the heck is . . .?" answers questions that surface in the media in a very commonsense and logical format. Articles and general interest material look at bugs of all kinds.	5	5	all
http://bubbles.org	**Professor Bubbles knows his bubbles inside out!** This is great science. . . the science of bubbles. If you can understand how bubbles form and the form they take, you know a lot of science! All the information you need is here to make bubbles a meter in diameter and much longer. Kids love them and get into the science.	5	4	all
http://hawaii.cogsci.uiuc.edu/invent/airplanes.html	**To Fly is Everything.** "To invent an airplane is nothing. To build one is something. But to fly is everything" (Otto Lilienthal). This site covers the development and innovations that took the airplane from a fanciful idea to today's supersonic planes. Great site with lots of information.	5	5	all
http://www.wwf.org/	**World Wildlife Fund.** This is the global virtual headquarters of this altruistic organization. Excellent information as well as how to join and what you can do to stave off the extinction of a variety of wildlife.	5	5	all
http://www.nj.com/yucky/body/	**Your Gross & Cool Body:** Belches, snores, and any other releases of air! This site has instant appeal to students, and there is some great science here. The site is well set up, and if you teach body systems and you want a new slant, this site could provide it.	5+	5	all
http://www.bham.wednet.edu/space.htm	**Explorers of the Skies.** The big names are all here but where is Richard Pearce? A good collection and good material for creating a time chart of the discoveries and looking at what inspired each person to step out where no one had stepped before.	4	4	all
http://www2.plaguescape.com	**Plaguescape: Epidemiological analysis.** This brilliant site combines science, detective work, and an ancient mystery. The 10 plagues sent to curse the Egyptians for holding Moses and the Israelites are the setting for looking at outbreaks of diseases and plagues that worry us in the late 20th century. Set out in an investigative format, the site offers excellent learning opportunities.	5+	5+	all
http://www.dinosauria.com/	**Dinosauria On Line.** The consummate dinosaur page where you can find all you need to know at any level. Check out Jeff's Journal of Dinosaur Paleontology, Jeff's Dinosaur Picture Gallery, and much, much more.	4	5	all
http://unidata.ucar.edu/staff/blynds/tmp.html	**About Temperature.** Temperature and heat content: Is there a difference? Temperature is one of the most misunderstood scientific concepts. This site presents a good background on what temperature actually measures and the theory of thermodynamics.	4	4	9–12
http://www.flinnsci.com/	**Flinn Scientific.** This commercial site has such inspirational materials and great support that it managed to get included here. The site comes compete with a lot of very good ideas for lab design as well as some interesting "free" supplies.	4	4	all
http://www.pbs.org/wgbh/nova/balloon/science/density	**Floating and Sinking.** Now here is a different approach to this topic. Instead of sinking pieces of wood and metal, how about using air instead of water as the context? Students love balloons and you can have great fun and do some great science by finding how to get a balloon filled with helium to float in the classroom without heading up to the ceiling. Experiment by heating or cooling the room and see what effect this has. Good background information from this site.	5	5	K–8

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http://www.lhs.berkeley.edu/SII/SII-eqcountry/5eqcountry.homepage.html	**Big trouble in earthquake country.** The site focuses on the San Francisco area, but the principles applied here are universal. Use the earthquake hazard maps and other geologically relevant information to assess hazards for people in this region. Good risk management material. The site investigates the margin where the moving earth and humans come face to face.	5	5	9–12
http://www.fi.edu/city/	**Scientists in the City.** Let kids be real scientists in their city. Carry out the investigation of the ecosystem within your school, then share it with the rest of the world. Great database and spreadsheet work here for the older scientist and good comparison work for the younger scientist.	5	4	all
http://www.dartmouth.edu/~volcano/	**The Electronic Volcano.** "A window into the world of information on active volcanoes." With lots of information on volcanoes around the world, this very active site reflects the high number of erupting volcanoes at any one time. Encourage students to subscribe to the e-mail list. Lots of reports, video cams, maps, and models.	4	5	all
http://www.isd77.k12.mn.us/resources/cf/SciProjIntro.html	**Experimental Science Projects: An Introductory Level Guide.** This excellent guide for students doing a science project covers how to structure an investigation, gather information, and write the final report. Well laid out and succinct.	4	5	all
http://www.si.edu/elephant/eleupdat.htm	**Elephant Satellite Tracking in Malaysia.** Track elephants using satellites! Yes, from your own classroom, students can see how far the elephants go each day and where by means of small transponders attached to the elephants. There is also a video cam showing the elephants at the National Zoo and some excellent material on the human-elephant conflict in Malaysia.	4	5	all
http://www.miamisci.org/ph/	**The pH Factor: The Miami Museum of Science.** What a great introduction to the world of acids and bases for science students in grades 4–8. The site uses the seven Es: Excite, Explore, Explain, Expand, Extend, Exchange, and Examine as a framework, which works very well. Follow this very well-crafted site through the excellent lesson plans and interactive screens.	5+	5+	4–8
http://www.bergen.org/AAST/Projects/ES/PP/index.html	**People vs. Pests.** Insects are so small, but they can be very annoying and have been so to humans for a long time. This site investigates ways the human race can attempt to control some of the huge numbers of insect by using environmentally sound practices. Excellent background information and up-to-date attempts at using environmental controls. A good site to use as the basis for a more targeted look at environmental science.	4	5	4–12
http://www2.wku.edu/geoweb/geyser.html	**Internet Geyser Resources.** These unique geologic anomalies are a reminder of the heat that lies under our feet (and not far under our feet). This site is an excellent database of information, links, photos, and explanations. Encourage students to find specific information and present it to the class. An example might be to propose a sound geologic reason why geyser displays are intermittent, or explain how a geyser's water temperature can be greater than 100 degrees Celsius. Try to steer away from general projects, and have students analyze and synthesize the information presented.	4	5	all

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http://www.lightningsafety.com/	**National Lightning Safety Institute.** Coming into topics from a different perspective can often provide a context students can relate to or are fascinated by. The topic of lightning safety allows teachers to introduce forces, energy, electricity, and safety in the lab. Excellent and somewhat frightening statistics and information.	4	5	all
http://quest.arc.nasa.gov/neuron/	**NeurOn: Neurolab Online.** NASA's expertise on the web is becoming legendary, and this site is no exception. This is the home page for the interactive project associated with the space shuttle Neurolab mission STS-90. This lab will look into brain research in space. Students are encouraged to be part of the mission by sending e-mail messages to the scientists conducting the experiments. There will also be plenty of background information and follow-up after the mission has been completed.	5	5	4–12
http://www.chem4kids.com/	**Chem 4 Kids.** Excellent science site with a fun approach but also excellent scientific foundations, starting from the very basics and working through concepts such as the nature of matter, elements, atoms, and some basic math, then progressing through the concept of equations and reactions. Great material for students in grades 8–11 and background information for teachers of grades K–7.	5	5	all
http://www.naturalgas.org/	**Natural Gas Information and Educational Resources.** This great resource for teachers and students outlines the origins and applications/uses of natural gas as well as how it is extracted, purified, and brought to the marketplace.	5	5+	all
http://tqd.advanced.org/3103/index.html	**Welcome to Astrophysics: Life of a Star.** This is a great site, and it is worth downloading Shockwave to get the full effect of the animations. The information here is quite complex but the presentation is so well done that parts of it could be used at any level/age and includes the birth of stars, white dwarfs to red giants, neutron stars, supernovas, black holes, and a lot more.	5+	5	all
http://www.knowledgebydesign.com/tlmc/tlmc.html	**The Learning Matters of Chemistry.** Great material here for science teachers and senior high (grades 9–12) students. Check out the 3-D representation of the atoms and the changes in structure as the atomic number increases. Also check the software library, links to other sites, and the online exercises. To techo-science teachers: Make sure you see the molecular calculator!	5	5	9–12
http://chico.rice.edu/armadillo/Simulations/simserver.html	**Educational Space Simulations Project.** The concept here is to set up a simulation that feels as real as possible through the use of hands-on activities. The shuttle activities are great, with different schools acting as launch centers, rescue control, and landing sites. This is a great telecommunications activity site.	4	5	all
http://whale.wheelock.edu/	**WhaleNet.** Satellite tracking, field studies, projects, detailed descriptions of the variety of whales, and much more. A very comprehensive site and an ideal site for students to scan to find information in a limited time. Make this into a fun exercise with points for both speed and accuracy.	5	5	all
http://www.windows.umich.edu/	**Windows to the Universe.** Just when you think there cannot possibly be any more or any better astronomy sites, along comes another one. This site is an excellent starting point for exposing kids to the wonders of the universe. Each planet is dealt with, and all the latest photos and images are available. Other sections deal with space missions, up-to-date news, "cool stuff," teacher materials, and an excellent look at planet Earth.	5+	5+	all
http://www.w3.org/vl/Physics/Overview.html	**The Physics section of the WWW Virtual Library.** This site lists specialist areas such as accelerator physics (nothing to do with cars), plasma science, and astrophysics as well as the commercial sites, academic institutions, and super-specialized areas with names that possibly three people on the planet can spell.	3	5	9–12

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http://www.physics.uiuc.edu/courses/150/	This is the course information for Physics 150 at the University of Illinois at Urbana-Champaign. The course uses the text ***Physics for Poets***. The good thing about this site is it covers much of the grade 11 and 12 program and provides copies of all the OHTs the lecturers use for their presentations. Get a hold of a color printer and print them off and you will have one of the most useful resources imaginable on everything from mechanics, waves, quantum physics, and relativity to astronomy.	5	5	9–12
http://www-chaos.umd.edu/	**Chaos at Maryland.** A great title for a look at chaos theory. Chaos does not feature in our present curriculum, but it probably should as it is a change in the way researchers approach doing "good science." The chaos group at Maryland is multidisciplinary, involving math, engineering, and science chairs. Fractals are one output of chaos theory, but the scientific notion that a small change now does matter is one that has been slow to sink below the level of postgraduate study.	4	5	9–12
http://physicsweb.org/TIPTOP/	**The Internet Pilot to Physics** is a resource base for physics teachers looking to keep in touch with what is happening around the world, with links to software resources, journals, experiments, jobs, equipment, conferences, and much more. Not much here for students but some good resources for teachers.	4	5	9–12
http://192.239.146.18/PSAM.html	**The Physical Science Activity Manual.** This is great: 34 hands-on activities for teaching physical science. Download them in either MAC or Windows format and away you go. The work here is relevant for grades 6–12. Everything from Newton's laws to Baked Ice Cream demonstrating the concepts of heat flow and insulation!	4	5	6–12
http://www.fnal.gov/fermilab_home.html	**Fermi National Accelerator Laboratory (Fermilab) Home Page.** Get your physics from the people discovering it! There is something about reading about the evolving state of physics from the people who are actually doing the discovering. Some great units here would fit into the grade 11/12 physics courses very well. There are excellent sections on the discovery of the top quark, The Nature of Nature, and much more. For particle physics, this is the place to go.	4	5	9–12
http://www.ncsa.uiuc.edu/Pubs/access/93.1/93.1Superconduct.html	**Understanding high-temperature superconductivity.** A good site for physics students to explore. Some good background information could support the nuclear physics section of the science and physical science curricula. Superconductivity has profound implications on a variety of scientific areas, and all this can be done in the lab at your school.	4	5	9–12
http://web.mit.edu/~redingtn/www/netadv/	**The Net Advance of Physics.** This rather obscure title refers to a set of links to articles on a variety of subjects mostly at the university level. Like the preceding site, this site has some good background information that could support the nuclear physics section of the science and physical science curricula.	3	5	9–12
http://www.phys.washington.edu/groups/peg/	**Physics Education Group (PEG)** has a very good home page looking at the relationship between research in education and physics and good teaching and curriculum development. Well worth a look if you have been teaching a few years and are now wondering why you teach what you teach and whether there is a better way.	3	5	9–12
http://www.vetinfonet.com/kidzoo/	**KidZoo.** A great site combining all the benefits of the Internet. Hear the animals, follow their tracks, and check out what the vet has to say about how to look after those exotic pets. How would students cope having an alligator for a pet? How would they feed it? What would it live in? These good questions encourage students to examine the habitat and characteristics of these animals.	5	5	K–8

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http://odin.phy.bris.ac.uk:8080/dr_neutrino/index.html	**Ask Dr. Neutrino!** Yes, that's right. Dr. Neutrino is just waiting for your questions on anything to do with physics. What's more, he seems to know what he is talking about and at a level most students in grades 11 and 12 will relate to. This is a bit of fun and educational at the same time. Great service for all those physics correspondence students out there! You can also look back at all the questions submitted so far this year.	5	4	9–12
http://www.hood-consulting.com	**What a title: Amazing Science at the Roxy!** This site is great, wonderfully set up, and very appealing to kids and teachers alike and makes other science sites look dull! Chemistry has a real future through sites such as this one. Look for the physics site to be released soon. A top 10 site.	5+	5+	all
http://minerals.cr.usgs.gov/gips/aii-home.htm	This site is excellent. **Understanding Our Planet Through Chemistry** is an attempt to contextualize chemistry. The site deals with fundamental chemistry concepts (senior ones) through such tasks as determining the age of the earth and the damage from acid rain, predicting volcanic events and asteroids/comets colliding with the earth, and much more. Conceptually an excellent site with very good content. Great for grade 10–11 chemistry. Makes it into the top 10.	5+	5+	9–12
http://www.shef.ac.uk:80/~chem/web-elements/	**WebElements.** Cyberspace has lots of periodic tables, but none match this one for both simplicity and depth. Useful from grade 1 to grade 12. This site is extremely comprehensive but doesn't overawe. A top 10 site.	5+	5+	all
http://www.anachem.umu.se/cgi-bin/pointer.exe?MattersOfPublicConcern	**Chemistry Teaching Resources: World Wide Issues Involving Chemistry.** A student could be given the task of looking at this site once a week and reporting to the class on three to four of the numerous articles. Topics on matters of public concern range from ozone to prions (microviruses causing disease), but the best article reported a link between a tribal group in New Guinea that practices cannibalism and mad cow disease and chemistry.	4	5+	9–12
http://wild-turkey.mit.edu/Chemicool/	This very **comprehensive periodic table** is presented exceptionally well. Leave it for grades 11–12 to explore. Each element has information on states, energies, oxidation, appearance and characteristics, common reactions, other forms, atomic radii, conductivity, and abundance. This will be a well-used site as information is both comprehensive and very readable.	5	5	11–12
http://chemistry.rsc.org/rsc	**Royal Society of Chemistry.** Lots of history going down here for those interested. Plenty of research background, but check out the Library and Information Centre. Senior students will use this for research, and you can help them interpret the information! Very good serious science site.	4	5	9–12
http://www.csc.fi/lul/chem/graphics.html	**Chemist's Art Gallery.** This is mostly senior high chemistry material but general science courses could benefit from some of the very good animations. As chemistry is a very conceptual subject, the ability to "see" chemical reactions and the structure of molecules aids students' understanding and ability to construct concrete images and models of understanding. A wide range of links are available from here that use some great VRML and Java applications to produce very realistic models and animations.	5	4	9–12
http://www.netcomuk.co.uk/~rpeters1/auf1con.htm	**Chemistry: A Teaching Resource for 14–16 Year Old Chemistry Students.** This is a basic text and diagram approach, but the volume of content here will make any chemist's day.	3	5	10–12
http://www.mesc.usgs.gov/Butterfly.html	**Children's Butterfly Site.** The site deals beautifully with both butterflies and moths. Lots of color and images as well as a good introduction for students. A great deal of information is buried in the Frequently Asked Questions section, and the site has great photographs, a good list of helpful books and videos, and plenty of links.	5+	4	K–8

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http://www.chem.ucla.edu/chempointers.html	**Chemistry WWW Virtual Library.** This list of sites includes such areas as resources, academic institutions, news groups, commercial organizations, and software sites.	3	5	9–12
http://www.nyu.edu/pages/mathmol/	**MathMol Home Page is all about molecular models** and presents some excellent models of water with good explanations of polarity and the change from ice to water at the molecular level. There is also some great material on carbon compounds for grades 10–12. You can also download software (free) to construct your own models as well as access a heap of reference sites.	5	4	all
http://vflylab.calstatela.edu/edesktop/VirtApps/VflyLab/IntroVflyLab.html	Welcome to the **Virtual FlyLab.** This unique concept allows you or students to take on the role of research geneticist to learn the principles of genetic inheritance. You can design matings between male and female flies that carry specific genetic mutations. The program will mate the flies and show you the progeny without waiting for a week or two! Excellent site for demonstrating dominant and recessive characteristics, lethal versus nonlethal mutations, and so on.	5+	5+	9–12
http://morgan.rutgers.edu/	**Learning Science by Doing Science.** This site's concept is research for students, and it is very well done. At the moment the only program is a genetics tutorial, but it is great. It is a self-directed package and ideal for both teacher support and student study.	5	5	9–12
http://www.cellsalive.com/	**Cells Alive!** Even with high-powered microscopes, which some schools have access to, clear images of cells and their structures are hard to come by. At this site you can check out images and short video clips of a variety of cells in action. There is information and images here on the AIDS virus, macrophages "talking" to lymphocytes, penicillin, dividing bacteria, and much more.	5+	5+	8–12
http://sln.fi.edu/biosci/heart.html	**The Heart.** Explore the heart in amazing detail. This site is great biology as well as great fun. Discover the complexities of the organ's development and structure, follow the blood through the blood vessels, and wander through the weblike body systems. Also discover how to have a healthy heart and monitor its health. This is a great place to visit.	5	5	9–12
http://www-itg.lbl.gov/Frog	**Whole Frog?** So you have tried the 2-D version, now try the 3-D version. This clever site supplies the software online. The information is the result of magnetic resonance imaging (MRI) technology. The intent of the project is, eventually, to "enter the heart and fly down blood vessels, poking our head out at any point to see the structure of the surrounding [frog's] anatomy."	5	5	9–12
http://www.loni.ucla.edu/data/rat/	**A 3D Digital map of Rat Anatomy.** Well, the title sort of says it all! But for the keen, this rat was an adult male Sprague Dawley perfused with dye for good black/white differentiation. The body was cryosectioned, imaged every 50 microns, then resampled every 31.25 microns. The map is annotated and labeled. This is all very amazing for the biologists out there.	5	5	9–12
http://library.advanced.org/11924/	**The Wizard's Lab.** Some good material here deals with physics concepts for grades 9 and up. Motion, sound and waves, electricity, and light and energy are the main areas presented.	4	4	9–12
http://mars.ivv.nasa.gov/pilot/water_cycle/grabber2.html	**The Water Cycle.** The water, or hydrologic, cycle is an essential conservation technique practiced by planet Earth whereby the water evaporates from the land and oceans, condenses in the upper atmosphere, and falls back to Earth in the form of rain. This site introduces the process and the microprocesses that make up the cycle. Excellent work here on evaporation, condensation, saturation, and precipitation.	5	5	K–10

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AltaVista (general)	http://www.altavista.com/	**Yahooligans** (K–12 only)	http://www.yahooligans.com/
Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

URL	Comments	presentation	content	grade level
http://www.ornl.gov/TechResources/Human_Genome/home.html	**Human Genome Project Information.** The mapping of the human genome is one of the most extraordinary scientific exploits of this century, involving scientists from around the world. If you want to teach genetics in context, get a hold of this site. With excellent material clearly explained, this site is very extensive and will take students and teachers alike some time to exhaust.	5	5	9–12
http://www.york.biosis.org/zrdocs/zrprod/zoorec.htm	**The Zoological Record.** This is an index to worldwide zoologic data and literature. Hosted by the Zoological Society of London, it is very extensive. It is very good for teaching nomenclature as well as providing a taxonomic hierarchy browse-and-search facility.	4	5	9–12
http://nmnhwww.si.edu/nmnhweb.html	This site of the **National Museum of Natural History at the Smithsonian Institute** is a treasure trove of information. Check out the Anthropology section or Life in the Ancient Seas, Bird Hall, or the Fossil Lab. This is a good site to introduce senior students to the web and around which to set some research exercises.	4	5	9–12
http://c3.org/classroom/bbc.html	**Chlorine Can Bring Chemistry to Life.** Not surprisingly, this site is from the U.S. Chlorine Council, but their point is a good one. Select an element and use it to show the general trends of the periodic table. The only difficulty is the very toxic nature of chlorine. Good material here looks at applications of chlorine, its atomic structure, and common reactions. Good teacher-developed materials as well as student worksheets.	5	4	9–12
http://library.advanced.org/3659/	**CHEMystery: Interactive Guide to Chemistry.** This excellent virtual textbook is an invaluable classroom tool to provide students with notes and activities. Excellently presented material deals with all aspects of introductory chemistry, including atomic theory, states of matter, reactions, the periodic table, bonding, energy, equilibrium, acids and bases, electrochemistry, organic chemistry, and nuclear chemistry. Also check out CHEMystery2 at http://www.educationx.com/chemistry/index.html	5	5+	9–12
http://www.geo.mtu.edu/volcanoes/	**Michigan Technological University Volcanoes Page.** With more than 508,000 visitors, this page is one of the most used pages on the web. Mount St. Helens is here as are all the other currently active volcanoes around the world as well as a reference map and all things volcanic.	5	5+	9–12
http://www.tomorrows-girl.com/wattworks.htm	**Watt Works: Ideas Forum for Girls in Science.** Excellent support here encourages girls to get involved in science at all levels. The site offers a lot of reports as well as programs girls can get involved in. Often it is only when young women realize there are millions of women scientists around the world that they see what a science career has to offer.	5	5	all
http://scifun.chem.wisc.edu/scifun.html?	**Science is Fun in the Lab of Shakhashiri.** This professor at the University of Wisconsin-Madison has really gone to town to prove science can and should be fun. Check out the chemical of the week, experiments students can do at home, science in the media, and some of Shakhashiri's presentations. Great site worth visiting regularly.	5	5	all
http://www.wsu.edu/DrUniverse/	**Ask Dr. Universe.** Got a question on anything . . . anything at all? Then send it through to Dr. Universe. A question is featured every day, and you can send in your own questions. Why are flowers colored the way they are? Why does bread rise? Do frogs sleep? And much more.	5	4	all

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URL	Comments	presentation	content	grade level
http://www.ems.psu.edu/	**Earth & Mineral Resources.** At this site from Penn State College of Earth and Mineral Science, you can check out the faculty or head off to the unique weather site featuring virtual reality weather images. Good fun and dramas of things to come. There are also some great online teaching materials to assist the teaching of senior geoscience.	5+	5	9–12
http://www.jpl.nasa.gov/sircxsar/	**Space radar images of Earth.** Plenty of pictures. This is an excellent site for awareness of global geologic features. It allows students to put their country and their known space into perspective and appreciate the size of Earth and its features.	4	5	9–12
http://www.geo.mtu.edu/volcanoes/rabaul/	This is a very comprehensive look at the **Rabaul volcano.** Included are pictures, satellite images, map perspectives, and much more. A good in-depth study.	4	5	9–12
http://www.agso.gov.au/	**Australian Geological Survey Organisation.** Excellent site with great presentation for schools. Content is relevant and well set up. This mostly teacher-reference site provides those teaching geology at this level with some great material.	5	4	9–12
http://www.observe.ivv.nasa.gov/nasa/core.shtml	**Observatorium.** The Observatorium is the public access point for space and Earth data. This is an excellent site with subject matter prepared for the layperson and students/teachers. Information on space science, aeronautics, Earth (El Nino, ozone) as well as teacher's guides and fun and games.	5	4	9–12
http://www.igc.apc.org/nwf/kids/index.html	**Animal Tracks.** This beautifully crafted National Wildlife Federation site has been written specifically for elementary-aged students. The Games section combines a good deal of education with fun activities and provides an excellent vehicle for discussions on diversity, similar and different characteristics, types of tracks, and so on. Go on the Cool Tour and visit the wetlands and endangered species, and realize the importance of water.	5+	5+	K–8
http://www.waterwatch.org.au/welcome.htm	**Waterwatch.** This is a volunteer program that encourages the community to monitor the quality of local water supplies, lakes, and rivers. For schools looking at water as a theme, this site provides some excellent data as well as contacts and ideas.	5	4	all
http://www.best.com/~funsci/	**Fun Science Gallery.** Great front page, and the material that follows is equal to the task. This collection of scientific experiments can be carried out with minimal materials. Make a microscope, a telescope, or herbarium, check out blood cells, and much more. Great site for home or school. Some of these would make great homework projects.	5	5	K–8
http://www.ucmp.berkeley.edu/geology/tectonics.html	**Plate Tectonics.** Great site that first deals with the development of plate tectonic theory and then moves into a good explanation of the mechanisms thought to provide the energy for this massive movement. The best part is the animated GIFs that show how sections of the crust have moved during the various geologic eras. They take a little time to download, but you can save them and use them in the classroom with great effect.	5+	5	4–12
http://www.britannia.com/science/science1.html	**Science in the UK.** To keep up with the latest news in the world of science in the United Kingdom, this site is a must-see. The site contains excellent stories that students of all ages can read and report on to the class. The year's top stories are archived for easy retrieval.	4	5	all
http://library.advanced.org/10348/home.html	**Body Quest.** This excellent quest looks at the human body. Sections investigate various parts and systems of the human body, including the skeletal, circulatory, immune, digestive, endocrine, reproductive, muscular, and nervous systems and the heart, brain, intestines, nose, eyes, and ears. Excellent material along with practical experiments and a quiz.	5	5	6–12

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http://www.discovery.com/stories/stories.html	**Discovery Channel Online: Feature Stories.** Excellent source of appropriate news material as well as background data and support linked to current happenings of a scientific and technological nature. The articles are all archived and are very well presented. Short and to the point, they provide excellent digest material on topics ranging from cutting edge technologies to volcanoes, weather, weird science, asteroids, Mars, and much more.	5	5+	all
http://www.tenan vuurwerk.nl/	**The Endangered Animals of the World.** This joint project is hosted by two schools, one in the United States and one in the Netherlands. The project is joined by an additional 130+ schools that have sent in reports on various endangered animals, often specific to their location or country. The reports vary considerably, but this is an excellent site to have your students prepare a report for. You may wish to have a competition and send the best reports. The information here is excellent in itself.	5	5	all
http://wwwga.usgs.gov/edu/indexjs.html	**Water Science for Schools.** This great resource base is for teachers using water as a theme or a context base for their science work. Everything is here from interactive units and data to maps and teaching ideas. The material, which is useful for almost all levels, includes some special topics material and plenty of inspirational ideas and applications.	5	5+	all
http://www.mcet.edu/humangenome/overview.html	**The Human Genome Project at MCET.** This excellent site investigates the ethical, legal, and social implications of the genetic information compiled by the global human genome mapping project and other such projects. Work from around the world is displayed in an excellent student showcase. An interactive student forum, The Zone, focuses on sickle cell disease. The resource center provides excellent printed material teachers can make into transparencies along with articles and hands-on ideas.	5	5+	8-12
http://www.onr.navy.mil/onr/careers/	**Office of Naval Research: Careers in Oceanography.** Many students want to be oceanographers and follow in the footsteps of Jacques Cousteau, and this excellent site shows them the sorts of opportunities that exist.	5	4	8-12
http://helios.gsfc.nasa.gov/	**Cosmic and Heliospheric Learning Center.** This excellent site introduces students to astrophysics in a bright and entertaining way. Sections cover an introduction to astrophysics, cosmic rays, the heliosphere, and a history of the development of ideas. There is also a good glossary and an Ask a Physicist link.	5+	5	10-12
http://www.onr.navy.mil/sci_tech/ocean/Info/NRtWhale/	**The Northern Right Whale Monitoring Project.** A good introduction to the tracking and surveillance of the northern right whale by the U.S. navy, the site identifies and explains the various technologies used and the results of the navy's work.	4	4	4-10
http://www.met.fsu.edu/explores/resources.html	**The Explores! Teacher's Resource Guide.** This is a great collection of tools for using satellite data and the resulting information. Eight sections cover such topics as K-12 Meteorological Outreach Programs, Mission to Planet Earth, the Weather Satellite Resource Guide, and some excellent classroom support material. Good sections aimed at younger students have been specially prepared.	4	5+	all
http://www.iit.edu/~smile/physinde.html	**Smile Program Physics Index.** Smile actually stands for Science and Mathematics Initiative Learning Enhancement, and this huge compendium of lesson plans deals with every area of physics imaginable. Set out in themes, the site is easy to navigate and has a great collection of hundreds of plans for grades 3-12+.	4	5	3-12

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http://www.usgs.gov/education/learnweb/volcano/index.html	**Earth Science: Volcanoes.** This excellent site delivers a good set of lesson plans and an excellent VRML model of Mt. St. Helens as well as all the information you could want on the topic of volcanoes, how they form, how they erupt, and why they develop where they do.	5	5	all
http://response.restoration.noaa.gov/kids/kids.html	**Oil Spills & Hazardous Chemical Accidents: Especially for Kids.** This section is an excellent set of experiments for students to carry out in the classroom showing why oil spills can be so devastating to land forms and the life in the land-sea margins. Experiments are designed for all levels.	5	5+	all
http://www.selu.com/~bio/gorilla/	**Gorillas Online.** Since the film "Gorillas in the Mist," there has been considerable interest in the plight of these impressive animals. Their ability to display humanlike behaviors has endeared them to most people. This site investigates the facts behind their possible survival and their main adversaries. Good information on distribution, population status, behavior, and research. This site provides an excellent base for both teachers and students to make predictions about the animals' future.	4	5	all
http://www.geophys.washington.edu/tsunami/intro.html	**Tsunami!** The word is Japanese for harbor wave and although tsunamis are sometimes referred to as tidal waves, they are not related to tides. Tsunamis are back in the news with several causing devastating effects. This site investigates what causes them, the physics of their travel, and the systems in place to warn countries bordering the Pacific ocean about them.	4	5	all
http://www.history.rochester.edu/class/SOLAR/SOLAR.html	**Solar Energy.** Solar energy is not at the forefront of the news at present because the price of oil is at a low point. But be assured that eventually this will be the world's primary energy source. This site looks at the indirect forms of solar energy, provides an excellent slide show on the use of biomass, presents current research themes, provides some good examples of a solar house, and describes development of photovoltaic cells and the use of solar energy in the space program.	4	5+	all
http://www.unidata.ucar.edu/staff/blynds/rnbw.html	**About Rainbows.** Explaining rainbows to the average 7 year old is quite difficult, but this site may help. At least you might understand this rather special meteorologic phenomenon. How rainbows form, why they look like they do, and why you can never quite touch them are all dealt with here.	4	4	all
http://www.observe.ivv.nasa.gov/nasa/exhibits/toys_space/toys.shtml	**Toys in Space.** In 1993, a special lift-off saw the Endeavor Space Shuttle carry into orbit a collection of toys to see whether they would work in space. Does a yoyo still "yoyo" in space? Will a boomerang still come back? This is a brilliant site to start off an investigation of forces of gravity. Students and teachers alike misunderstand gravity, so this site should be compulsory viewing for all. Have the students predict which toys will work and which will not, and maybe after visiting this site, students will not declare there is no gravity in space!	5+	5-	all
http://www.messiah.edu/hpages/facstaff/barrett/slinky/home.htm	**Slinky Home Page.** This is the home page of the Slinky spring toy. This clever site investigates the physics behind this toy's behavior as well as some applications. It also discusses harmonic motion, centrifugal force (the force you have when you don't have a force!), and the history of the toy's development. You can even play the Slinky song! A good set of links, too.	5	4	8–12

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Social Studies

URL	Comments	presentation	content	grade level
http://www.amnesty.org/	**Amnesty International.** The home page for this well-known organization whose goal is to improve human rights worldwide is very well laid out with enormous amounts of information on almost every country. The activities and statistics for some countries are difficult to imagine. This is a good site for senior students (grades 8–12) or for teachers looking for data on the social conditions of a variety of countries.	5+	5	8–12
http://users.aol.com/cambodia/	**Cambodia. Beauty and Darkness: the Odyssey of the Khmer People.** This very large and well-constructed site devoted to the modern history of Cambodia presents both beauty and darkness graphically and frankly. The history of the Cambodian people is untangled, and the horror of the land mines that still wreak havoc in this beautiful country is described. Refugee statistics, news summaries, and art and culture are all here.	5	5+	4–12
http://www.un.org	This massive site details the work of the **United Nations.** Explore the world from here looking at peace-keeping, international politics, and all the other areas of influence the United Nations has.	5	5+	all
http://www.greenpeace.org/	**Greenpeace.** The rainbow warriors of the environmental age are here in style. Some bad press has tarnished their squeaky clean facade, but they still do an amazing job out there in numerous different situations in almost every country of the world.	5	5+	all
http://www.webofculture.com/	**The Web of Culture.** This massive site looks at almost every aspect of culture imaginable. Some great areas include gestures and cuisine; other general areas include religions, currency, and languages.	5	5+	all
http://rs6.loc.gov/amhome.html	**American Memory.** This excellent site from the Library of Congress presents American history brilliantly and with varying degrees of depth. Plan to spend some time at this site. Everything is here from text and photos to sound recordings and video.	5	5+	all
http://www.lam.mus.ca.us/webmuseums/	This site offers a comprehensive and easy-to-use set of **links to museums** and other sites with resources on different cultures around the world. Links cover all parts of the globe.	5	5+	all
http://www.netins.net/showcase/creative/lincoln.html	**Abraham Lincoln Online.** An excellent site especially crafted for elementary-aged students includes a biography, Lincoln's importance in history, and significant speeches.	5	5	4–8
http://www.uncle-sam.com/	**The Great American Website.** This site warehouses government resources on the web. This huge compendium of material is laid out for ease of access. Each week various aspects of the site are highlighted. Areas deal with government, the judiciary, independent agencies, government departments, museums, libraries . . . the list goes on. Great site that requires some time to sort through.	5	5+	4–12
http://www.wiesenthal.com/	This is the official home page of the **International Center For Holocaust Remembrance** in Los Angeles. As well as material for children about the Holocaust, the site has a lot of material on the theme of intolerance in other historic contexts.	4	5	4–12

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http://www.helloindia.com/	**Hello India.** This excellent site presents a good overview of this populous country, especially the culture and community that is India.	5	5+	all
http://www.oi.uchicago.edu:80/OI/DEPT/RA/ABZU/ABZU.HTML	This is a guide to the resources available for studying the **ancient Near East** at the Oriental Institute Research Archives. The site is well laid out with access to journals, museum collections, archaeologic sites, and library catalogs as well as regional sites. A great place to have students collect information then organize it on a time line, or have them compare and contrast a time line for this culture and another culture.	5	5+	all
http://www.execpc.com/~dboals/	This is the **History/Social Studies Web Site for K–12 Teachers.** Social studies is such a diverse area that this massive list site, which has more than 1,000 entries, is included here. Some are good, some are reasonable, others are a waste of time, but everyone will find something of some use in this site.	4	5+	all
http://www.nde.state.ne.us/SS/ss.html	**Social Studies Resources HomePage.** A good set of links for schools to use. Join the list server for social studies teachers and become part of the world wide web of teachers sharing information and questions. The K–12 Social Studies Framework for Nebraska is here, and its layout is quite impressive; it's worth a look. A good reference site. Also check out the lesson plan search.	4	5+	all
http://www.julen.net/aw/	**Ancient World Web.** This major work is starting to become the victim of its own size. It contains a large number of references to the ancient world. Use the subject or geography index to find your way around.	4	5+	all
http://www.georgetown.edu/labyrinth/labyrinth-home.html	**The Labyrinth: Resources for Medieval Studies.** This site is a set of links and information about this greatly immortalized time in the history of the planet. However, after spending some time looking at how the people actually lived, you'll probably want to stick with the 20th century.	4	5+	all
http://www.history.org/almanack.htm	**Historical Almanack.** Colonial Williamsburg's online almanac allows you to meet the people of 1750–1783 and see where they lived, how they lived, and the challenges they faced each day. Excellent collection of information presented in context. Meet the Geddy and the Randolph families as well as some of the nation's founders, including George Washington, Thomas Jefferson, and Patrick Henry.	5	5	4–12
http://www.gsn.org/project/gg/index.html	**GeoGame.** This online game brings the geography of the world alive to students. Through the game, students learn geography terms, interpret maps, and increase their cultural understanding.	5	5	all
http://www.gsn.org/gsn/proj/everest/index.html	**Kids Peak Climb Mt. Everest.** This is a great project for students to follow and get some idea of the geography of the regions around Mt. Everest. This reconstruction of Sir Edmund Hillary's adventure is very well presented, and kids get regular e-mail updates of Sandy Hill Pittman as she attempts the climb.	5	5	all
http://map.org	**WorldWatch: Monitoring World Crises.** This excellent site does just what it suggests. As well as using the Internet sources and Reuters for general news, it contains linked sites such as the United Nations, UNICEF, the Red Cross, and even the CIA.	4	5	4–12

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http://www.ecom.unimelb.edu.au/ecowww/school.html	A list of Selected Internet **Resources for Teachers of Economics in Secondary Schools.** This excellent site from Australia goes through the main economics web pages and describes how to use them effectively. Well worth visiting for anyone who teaches economics.	3	5+	9–12
http://www.cnn.com	**The CNN home page.** The vast resources of CNN are made available through this home page. Follow stories of social significance as they happen, and get students to report back to the class each day on the events of the past 24 hours. This is an excellent site, and you will use it regularly. A top 10 site.	5+	5+	all
http://www.vtourist.com//	**The Virtual Tourist.** This site has been around for some time now and just improves with age. If students need facts or material about a particular country, just click onto that part of the world and the material is there. Not exhaustive on each site, but good if you just want some background. A top 10 site.	5+	5+	all
http://map.org/index.html#directory	**MAP International.** This Christian Relief Agency has compiled an excellent site of information from around the world, examining social issues and work carried out by relief agencies. It also has an excellent news service.	5+	5+	all
http://www.nativeweb.org/	**Native Web.** This very big site has links to all sorts of places. The electronic store lists native enterprises around the world. There are a range of newsletters and news groups as well as a regional group of sites. An excellent site from which teachers can draw information and for kids to browse and make direct contact with different native groups around the world.	5+	5+	all
http://www.mahidol.ac.th/Thailand/Thailand-main.html	**Thailand:** The history, monarchy, education, arts, government, economy, and religious influences of Thailand all appear. An excellent overview of the country, its people, and the future direction of its proud people.	5	5	all
http://hum.amu.edu.pl/~zbzw/glob/glob1.htm	The Great Gallery on the World Wide Web. This amazing site contains **visual representations of Earth**, either as a globe or in projection formats. See the effect of volcanoes on the atmosphere, time zones, El Nino, wind speeds, and wave heights. Pick from more than 150 different presentations. Ideal for getting students to appreciate the relationship between Earth and maps depicting it.	5+	5+	all
http://www.historychannel.com/today/	**This Day in History.** A good site where teachers can get a slice of this day in history and put it up on the whiteboard. To get a good perspective of the planet they live on, students need to be aware of events that took place before they arrived, and this is a subtle tool for doing just that.	4	4	all
http://www.euronet.nl/users/mbleeker/suriname/suri-eng.html	You'll now know where **Suriname** is and a lot about the **rain forests** there thanks to this excellent site with lots of information. This would be an ideal community for the class to study. The bauxite mining is running out, so logging is becoming the next opportunity. This is not a simulation; it is real and an excellent example of a community looking at economic and social options. It is a privilege to watch as the drama unfolds.	5+	5+	all
http://www.ex.ac.uk/~RDavies/arian/llyfr.html	**A History of Money from Ancient Times to the Present Day**. At this excellent discovery-style site, you can look at the origins of money, contemporary economics, and much more. Excellent top 10 site.	5+	5+	all

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http://www.terraquest.com/galapagos/intro.html	**Virtual Galapagos.** At this extraordinary site, the adventurers have posted dispatches chronicling their journey to this group of islands where evolutionary time has stood still. One of a series of adventures through TerraQuest, it allows students to be active participants in real-life adventures.	5+	5+	all
http://www.kids-commons.net/geotouch/	**GeoTouch Project.** This project-oriented virtual classroom looks at the global environment. Well-organized and well-managed, this collaborative project is good for grade 5–9 students.	5	5	5–9
http://www.emich.edu/public/geo/rtownintro.html	**The Rivertown Simulation.** Rivertown is a fictitious town undergoing revitalization by . . . you and your students! The project is a group effort, and you can participate or just watch. The project involves revitalizing the run-down town with new input. Projects start up ?egularly, so e-mail Norm Tyler soon and get on the list for the next attempt.	5	5	4–8
http://pubweb.parc.xerox.com/map/	This is the **Xerox map viewer.** Select a position on the globe, and a map is presented of that area. Different projections and features can be displayed. Each map has a zoom feature also. If you are doing anything with mapping, this is the site to visit. You can print all the maps and integrate them into a resource package.	5	5	all
http://207.125.183.3/jobe/projects.html	**Communities Around the World.** This excellent project uses e-mail messages to communicate with different communities around the world. The project is outlined well here and is a great use of the Internet at very little cost.	4	4	K–8
http://www.pantheon.org/mythica/	**The Encyclopedia Mythica.** An excellent collection of myths and legends from around the world. You can browse through all the different sections (allow lots of time), do a search through the articles, or look at myths of a particular country.	4	5	K–8
http://mayaquest.classroom.com/	**MayaQuest98.** This interactive field trip looks at archaeological sites and the history of the Mayan people. Join the team as they cycle around South America looking into the fascinating history of this civilization. Visit the site or purchase the CD ROM of the adventure; whichever you choose, this is an informative and fascinating tour.	5	5	all
http://earlyamerica.com/	**Archiving Early America.** This site focuses on the historic documents that provided the foundation for what America is today. Excellent material. There are lots of activities, commentaries, themes, and special sections. Check out On This Day in Early America on a daily basis to get a feel for what life was like.	5	5+	all
http://www.georgetown.edu/labyrinth/subjects/british_isles/celtic/celtic.html	**Celtic Connections.** Virtually everyone you talk to seems to have some relation to the Celts. This very thorough set of links provides access to the history, archaeology, culture, and life today. Very extensive and well set up.	5	5	all
http://www.egyptology.com/reeder/	**Reeder's Egypt Page.** This excellent site examines the art, archaeology, religion, and history of Egypt. Excellent background material for teachers and material for grade 8 students and above.	5	5	8–12
http://darkwing.uoregon.edu/~sergiok/brasil.html	This excellent site deals with **Brazil** and is well supported geographically and historically. You can check out topics from health issues to economics to Information in a Brazil-Nutshell; very cute.	5	5	all
http://www.onlineclass.com/BI/blueice.html	**Blue Ice: Focus on Antarctica.** This great, ongoing study provides e-mail and resource support with a teacher's guide. Great project. New projects start regularly, so you can join at your convenience.	5	5	all

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

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http://www.jasonproject.org/JASON/HTML/ISLAND.html	**Island Migration Simulation.** You can download this excellent simulation for use in the classroom. New islands are created through volcanic activity, and over time these islands become populated with plant life. You can adjust the migration rate of seeds to the island and other variables. Full instructions accompany this excellent classroom tool.	4	5	4–12
http://indonesia.elga.net.id	**Indonesian Homepage.** This is a great site for information on every aspect of life in Indonesia. There is good background on Bahasa Indonesia as well as the history and heroes of the country, news, magazines, and forums.	5	5+	8–12
http://www.english.upenn.edu/~afilreis/Holocaust/holhome.html	**Literature of the Holocaust.** This site is a set of links to dramatic and literary works describing this black spot in our not-so-distant past. Teachers should preview the site before sending students here, and, preferably, select sites to ensure that the objective of the lesson is not lost.	4	5	4–12
http://www.who.org/	**The World Health Organization.** This huge, very comprehensive, and exhaustive site looks at global health issues. WHO is an endemic feature of most second and third world countries. Without its initiatives, many of these countries would still be struggling to gain access to basic health support. The information can provide students with background to social issues and the link between health and poverty in third world countries.	4	5	all
http://www.city.net/	**City Net.** This site has more than 2,000 cities online to visit and explore. Local government information, community services, businesses, and links to more information appear.	4	5	all
http://www.worldwar1.com/	**World War I: Trenches on the Web** contains some excellent and easily searchable resources related to the first world war in such areas as documents, posters, photos, biographies, time lines, and weapons and has extensive links to other WWI sites.	4	5	all
http://www.ncss.org/home.html	**National Council for the Social Studies.** The United States has put a lot of time into this site and has produced a list of sites, a huge resource bank, curriculum materials from different states, news, and much more. The association draws members from 69 different countries and deals with issues from preschool to college level. Could be worth joining up!	4	5	all
http://www.footage.net/	Footage.net is a site devoted to cataloguing footage from the **top news services** around the world. Its searchable index can save a lot of time. Images and sound and video clips are available.	4	5	all
http://envirolink.org/enviroed/	**EnviroLink: The Online Environmental Community.** This education-based network links teachers who teach environmental awareness. The site has a lot of links to other sites as well as resources for teachers. Allow an hour or two to get through the site and find what you want.	4	5	all
http://www.GateWest.net/~green/	**From the Ground Up.** This teacher's site has been developed as a guide to look at food, agriculture, and sustainable development. There are lesson plans here, background essays, and worksheets for class use. The themes explored include a brief history of agriculture, organic practices, and the effect consumers have on food production trends.	4	5	all
http://www.fred.net/nhhs/project/index.htm	**The Civil Rights Movement: A Black History Celebration.** This site follows the work of a 9th-grade class that studied the civil rights movement. The result is a site worthy of study. There are projects, interviews, and a chronology of events. Excellent material from an interesting perspective.	4	5	9–12

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http://www.execpc.com/~dboals/europe.html	History sites on the web number in the tens of thousands. To research all of these and rank them is beyond the scope of this book. So here is a list of 500 sites related to the history of **Europe, Russia, and Eastern Europe**. Each site listed has a short summary. Excellent research base for both students and teachers.	4	5	all
http://www.apic.or.jp/japaninfo/	**Information about Japan.** This good site deals with the exciting and the essential such as getting a haircut in Japan and other interesting insights such as "Who says Japanese people don't kiss?" Very good site for the traveler and the social scientist of any age.	4	5	all
http://www.utenn.edu/uwa/vpps/ur/ut2kids/maps/map.html	**Mapmaker, Mapmaker, Make Me a Map.** This excellent introduction to mapmaking looks at map basics but quickly moves into more complex issues. If you are introducing mapping, look at this site first.	5	4	4–12
http://garnet.berkeley.edu:3333/budget/budget.html	**National Budget Simulation.** So you would like to have a go at balancing the national budget! Here's your chance. Take either the short or the long version. This is an excellent exercise for students as it opens their eyes to the many needs in their community and how these needs can be met. It is also a great exercise in determining priorities. What is more important: new roads or more social welfare?	4	5	9–12
http://sln.fi.edu/franklin/rotten.html	**Benjamin Franklin: Glimpses of the Man.** By any standard, Benjamin Franklin was an exceptional individual—so much so that categorizing him into one curriculum area is almost impossible. He was a statesman, inventor, economist, scientist, philosopher, and much more. Good site here arranges a worthwhile summary of his life.	4	5	all
http://www.webcom.com/journal/	***CSS* (Computers in Social Studies) *Journal*.** All social studies teachers should refer to this page regularly for its great content, especially at this time when all are in learning mode in this area. There's a great introduction to the Internet, discussions on the relevance of multimedia, lesson plans to assist in the infusion of technology into social studies, and lots more. A very practical and useful site.	4	5	all
http://www.timeout.co.uk:81/	This site deals with cities around the world and their weekly **arts and culture** offerings. TimeOut Worldwide city guide offers a great site to use for a global comparison. This study could be done over several weeks or a shorter time in a computer lab setup.	4	5	4–12
http://ecedweb.unomaha.edu/teachsug.htm	**EcEdWeb: Using the Internet to Teach Economics.** This is a great site for all economics and technology teachers to visit. Try out the currency exchange and the gang of 15 for a good example of using a wide range of resources, including the Internet, to access information and provide new material as an outcome.	4	5	K–12
http://www.s9.com/biography/	**Biographical Dictionary.** This is an encyclopedic collection of more than 25,000 biographies of the men and women who have shaped our world. Its male, European/American bias needs to be taken into account, but it is an excellent resource for any teacher of social studies. Entries range from brief to quite extensive, but all contain birth and death dates, main contribution, and literary and artistic achievements. Students could report on an individual each week or day.	4	5	all

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http://www.undcp.org/unlinks.html	**The United Nations Information Services.** This massive site has a large amount of references—everything from human rights to General Assembly documentation. Very useful but takes some time to navigate.	3	5	all
http://control.chalmers.se/vikings/viking.html	**Viking home page.** You have to come here just to see the animation. Excellent site with fascinating insight into this group of people who set out to conquer the world with determination and some good technology. There is an excellent set of photos as well as a good introduction to pre-Viking history of this region of Scandinavia.	5+	5	all
http://www.paris.org/	**Paris.** This city is something of an enigma no matter where you come from. The excellent site describes all the tourist, cultural, and eating highlights this city has to offer. This would be a good site to use to introduce city living for those living in smaller communities.	5	4	4–12
http://www.pbs.org/population_bomb/	**Paul Ehrlich and the Population Bomb**. If your course of study includes population studies, this site has to be dedicated viewing. Based on the very successful 1968 book, this site was developed to support the 1996 PBS documentary. A good stand-alone site even if you missed the broadcast.	5	4	4–12
http://www.columbia.edu/~tm146/sudan.html	**The Republic of Sudan.** This site offers information on a fascinating culture and the history of a country where it is warm or hot. There is a tremendous set of photographs of this region of Africa and also some sound tracks. The Sudan has a large tourist industry based on its aquatic life in the Gulf (when there are no oil spills!).	5	4	4–12
http://www.crs4.it/~luigi/SARDEGNA/sardegna.html	**The History of Sardinia.** This wonderful site looks at this Mediterranean enigma. From the description of the country's history to its people, this site is comprehensive and well laid out. This country has held a strategic position within Europe both geographically and politically, and the result has been a very turbulent history.	5	4	4–12
http://pathfinder.com/@@9R6vZgYAJvrUC7Dw/Asiaweek/	***Asiaweek* Online.** This journal looks at news and current events from this part of the world. There is archival material here as well as summaries of recent articles. The news map is an excellent tool to use in the classroom for improving geographic knowledge.	5	4	4–12
http://sunsite.unc.edu/expo/deadsea.scrolls.exhibit/intro.html	**The Dead Sea Scrolls.** This electronic version of the Scrolls From the Dead Sea exhibit at the Library of Congress emphasizes the Qumran community where the scrolls originated. The scrolls hold deep religious significance as well as open a window to a community. This is an excellent site of significance.	5	4	4–12
http://www.anc.org.za/	**African National Congress.** This site is a link to many other politically based sites as well as thoughts of the ANC and its members. Interesting set of Alliance home pages includes the South African Communist party!	5	4	9–12
http://www.ncdc.noaa.gov/	**National Climatic Data Center.** NCDC, the world's largest active archive of weather data, has a huge collection of reports and statistics.	5	5	8–12
http://www.africa.com/content.html	**Africa.com.** This great introduction to Africa has numerous links and information dealing with such aspects as news, education, religion, health, community, history, and politics. Excellent introductory material for research projects.	5	5+	all

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http://www.mapquest.com/	**Interactive Atlas.** This interesting site shows the potential of this type of technology. You can use the Interactive Atlas to hone in on any street in the United States until you are at street level. You can also use TripQuest to plan trips within continental North America. Enter your present location and where you want to go, and TripQuest plans your trip for you. Start off with a map of the entire United States and graduate through each level.	5	4	all
http://www.pbs.org/tal/un/	**Join Ted Turner on an electronic field trip to the United Nations.** Look through the history of the U.N. and what happens there today. Check out the classroom activities and the links. Excellent support material for any teacher looking into what this organization is up to.	5	4	all
http://sunsite.unc.edu/lunarbin/worldpop	**The World Population Clock.** This clock ticks at an alarming rate, currently at 5.9 billion, and two more factors of 10 are available! Cute site.	5	4	all
http://www.indiana.edu/~kglowack/athens/	**The Ancient City of Athens: a photographic archive.** This is a very good guide through Athens with some good photographs and topics in classical art and archaeology, civilizations, language, and history. Of interest to European history students is the topography and monuments of the region.	4	4	9–12
http://www.umdl.umich.edu/moa/	**Making of America.** This excellent site contains quality information on every facet of American experience through the years 1850-1877. It looks at the psychology, history, sociology, religion, science, and technology of America and Americans. With more than 620,000 pages of information, this is no small collection. Scans of 1,000 books and 50,000 journal articles of the time provide fascinating background for students of any culture and any country.	5	5+	all
http://pathfinder.com/@@1Z0OxPUcgMAQJaz/Life/lifehome.html	***Life* home page.** The magazine has reflected our social development and been a commentary on the past 40 years, and as such this is a great site of social significance.	5	4	all
http://sunsite.unc.edu/expo/vatican.exhibit/Vatican.exhibit.html	**The Vatican Exhibit.** The history and cultural renaissance that birthed the Vatican city are well explored in this Library of Congress exhibit. Excellent historic perspective of the time. The cultural wealth of this small city is vast, and much of it is stored away. As well as discussing items of religious significance, the site provides a window to the Vatican's art and "craft" collections.	5	4	all
http://www.consumerworld.org/	**Consumer World.** This site groups 1,700 consumer resources. It is a great site for statistics work or comparisons. There is also a great news section for money news and consumer agencies.	5	4	9–12
http://www.trinity.edu/~mkearl/time.html	**Times of Our Lives: The Study of Time.** This group of temporal deterministic horologists (you'll know what that term means now!) have put together a fascinating site that looks at the way in which time affects the social fabric. Issues include quality time with family, the change to a more flexible working schedule, the influence of the religious aspect of time, and the pressures of being on time. Well worth a look here for a unit of work at almost any level.	4	5	9–12
http://192.203.180.62/mlas/turkey.html	**Turkey.** There is plenty of news on the Kurds as well as Turkey's key military and strategic political role in the region. This is a very comprehensive site.	4	5	4–12

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http://www.perseus.tufts.edu/	**The Perseus Project: A Digital Library on Ancient Greece and Rome.** This extensive project archives art and archaeology, texts, and Greek lexica information. You can also order CDs for the project. There are some good teaching suggestions as well as other links and secondary resources.	4	4	4–12
http://www.asia-inc.com/index.html	***Asia Inc.* Online.** News and up-to-date information covers issues in the Asian region. This site has conference topics, summaries of articles from the magazine, and a good search facility.	4	4	7–12
http://www.search-beat.com/worldwar.htm	**World War Two Timeline . . . The Beat.** This great education resource allows both students and teachers to put the events of the second world war into perspective. Very well laid out and easy to follow.	5	4	8–12
http://www.greenpeace.org/cnuk.html	**The Greenpeace No.Nukes page.** News and latest events are here on this nuclear campaign website as well as some background on the mining and refining of uranium. The map looking at nuclear sites is fascinating as is a section on alternatives.	5	5	all
http://arcticcircle.uconn.edu/	**Arctic Circle.** This not-often-studied area of the planet seems to have missed out on the publicity its polar opposite, Antarctica, has received of late. This site is an excellent collection of information on Arctic culture, history, societal status, natural resources, and environmental issues. A compare and contrast exercise with Antarctica would be an excellent exercise for students in grades 4–10.	5	5	4–10
http://brazilonline.com/bentevi/lefte.html	**Brazil.** This is an excellent collection of photographs of Brazil and, in particular, its people. These are worth copying in color to use as starting points for discussion and as a cross-curricular study with language.	5+	4	all
http://fhss.byu.edu/HISTORY/timelink/201wh.htm	**A World History to 1500.** This site is based around a geographic development, and each geographic area is dealt with separately. Excellent material here is meant as a background source of information for the History 201 (World Civilization to AD 1500) course at Brigham Young University.	4	5	9–12
http://s700.uminho.pt/europa.html	**European Home Page.** Click on any country on the map of Europe for that country's home page. This is a great way to make contact with students in other countries, to find information on a specific country, or to get help if you teach languages and you are after some cultural background on a European country.	5	4	all
http://www.crwflags.com/fotw/flags/	**Flags of the World.** Just that: flags of the world. Useful for print-outs or inclusion on worksheets and units.	5	3	all
http://www.cco.caltech.edu/~bosnia/bosnia.html	**Teachers doing social studies or current affairs units on Bosnia** need look no further than this site. It has a complete range of resources on the topic from maps, background history, articles, image galleries, eyewitness accounts, documents, and artwork.	4	5	4–12

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http://www.henrygeorge.org/	**Understanding Economics.** This is a strongly worded site but worth including for the excellent statistics (every single person could live in a space smaller than the continent of North America, each with an acre of land, and the population density would still be less than Japan!). However, the interpretation of these statistics requires some wisdom. The site is an online course in economics, and economics teachers will find this site very useful with some very good essays and approaches to the major economic problems facing the world today.	4	5	9–12
http://socialstudies.com/who.html	**Social Studies School Service.** This is a great service from a commercial supplier of resources. A series of excellent, free online social studies units of work based on web sites come complete with lesson outlines and student activity sheets, which are very well written. Send for the 30+ catalogs as well if you are in the mood!	4	5+	4–12
http://www.cnd.org:8012/	***China News Digest.*** All the news from the international agencies collated in one place; 25,000 people come here every day to catch up on what is happening. You can also get *Hua Xia Wen Zhai*, the first comprehensive Chinese magazine on the Net.	4	5+	4–12
http://www.tokio.co.jp/jp/jpidx.html	***Japan Pictorial.*** This photo magazine examines various aspects of life in Japan. Very useful in giving students a better understanding of how the Japanese live.	5	4	all
http://wso.williams.edu/~junterek/	**Alexander the Great.** After starting his exploits at age 22, he had plenty of time to help build the Roman Empire. This site provides an excellent background to both the man and his exploits.	5	5	K–12
http://www.discovery.com/area/specials/deadsea/today.html	**Journey to the Center of the Earth.** This is a wonderfully written description of a journey to the Dead Sea by Jim Malusa. How can camels survive walking 700 kilometers without a drink? (No, they do not store water in their hump!) An excellent primer for a study on the Middle East.	4	5	all
http://edweb.sdsu.edu/people/cmathison/truths/truths.html	**Evidence of Democratic Principles in Our Schools.** This excellent series of exercises investigates the truths behind the Declaration of Independence within schools. Are these truths self-evident in our schools? Work through the three parts and investigate the depth of commitment to these truths within your school.	5	5	9–12
http://www.finweb.com/finweb.html	**Financial Economics.** FINWeb is a list site but a targeted one that teachers and students will find useful when looking at financial economics. Extensive and well set up.	4	4	9–12
http://school.discovery.com/spring97/programs/understanding-cities/index.html	**Understanding: Cities.** By looking at contemporary and historic mega-cities, this site compares and contrasts their needs and evolution. The site supports the video of the same name from the Discovery series. Plenty of ideas and activities online, and the video program costs only $29.95 and you have it forever (legally). Excellent material that should be part of every social science program.	5	5	4–12
http://www.atlapedia.com/	**Atlapedia Online: The Global Atlas.** In this excellent online site, you can find information on every country imaginable. Each profile offers information on geography, climate, religion, language, and history. Excellent site.	5	5	all

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http://earthrise.sdsc.edu/	**Earthrise is an amazing site.** Pick a spot on the earth, then wander through a huge range of photographs taken of that region from the space shuttle. This is a great site for comparing geographic features and for younger students to get a feel for what maps are and what countries actually look like. This site has many uses. Fascinating.	5+	5+	all
http://www.itdc.sbcss.k12.ca.us/curriculum/weather.html	**Weather Watchers.** The weather: Is it the same all over the world, or do different countries and regions of the world have different types of weather? Check out different regions around our planet and look at maps, weather patterns, and pictures. Compare and contrast different macroscopic geographic features and the resultant weather patterns they help produce.	5	5	all
http://www.samilan.com/	**South Asia Milan.** If you are after information on the Asian region, this major database is bound to provide the information you want. Use the site as a good skimming and scanning tool, and ask students to give a short presentation on a particular country's people or environment (allow 20 minutes online time). Each country can be searched in the areas of arts, business, education, food, history, science, religion, and much more. Very comprehensive site.	4	5+	all
http://www.jcu.edu.au/aff/history/	**The Electronic Journal of Australian and New Zealand History.** For history buffs, this excellent resource has well-written and interesting essays. Material covers the brief European and more considerable aboriginal (including Maori) history this region has experienced.	5	5	all
http://www.50states.com/	**50 States and Capitals.** Check out each state capital and get basic information along with the state's national bird and song and additional links. Simple and very effective site.	4	4	all
http://www.hyperhistory.com/online_n2/History_n2/a.html	**HyperHistory: A Historical Time Line.** This site puts history into perspective by presenting historic events in a sequence. Many schools may have a time line chart, but here you can access additional information under each of the topics. Excellent tool but the frames do not give quite the same sense of continuity the chart does even though they offer much more information.	4	5	all
http://www.ibiscom.com/index.html	**EyeWitness: History Through the Eyes of Those Who Lived It.** This is an excellent concept: Find people who were alive when historic events took place and ask them how they felt then and now and how they recall the situations, or find records from people who were alive at the time. Examples of events are the murder of Thomas Becket in 1170, Custer's last stand, the San Francisco earthquake, the attack on Pearl Harbor, the Norman invasion of England, and much more. Excellent material presented in a unique format.	5	5+	all
http://www.trigger.net/~think/	**Think: Opinions, Ideas, and Commentary.** An idea that works quite well, this site encourages students to look at the opinions people have and why they have formed them. The site also asks students to think about all aspects of the debates. The site uses newspapers and their editorials from around the world to teach the use of higher order thinking skills that allow for good decision making. A good site for all aspiring politicians.	4	4	all
http://www.kn.pacbell.com/wired/BHM/AfroAm.html	**Black History.** This is a collection of links to five areas: Sampling African America; Black History, past to present; Tuskegee Tragedy; Videoconferencing event; and Black History Hotlist. The civil rights cause is not over, as it rarely ever will be for minority groups, but awareness can be developed through studies such as at this site.	5	5	4–12

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http://www.wepworld.com:80/future/culture.htm	**Future Culture.** This very clever site tries to make students aware of different cultures and the traits that make up a culture. A good extension of this site would be for students to describe and provide a basis for a culture of the future. A very good quiz here assesses how much students know about cultures of the world.	5	5	all
http://octopus.gma.org/surfing/imaging/index.html	**Imaging the Earth.** This great collection of ideas and lesson plans uses the research power of satellites and NASA. The site provides all the resources to investigate map projections and navigation, go on a treasure hunt that draws on mapping skills, make your own globe, and answer questions we all asked but never got a good answer to such as "How high is the sky?"	5	5	all
http://www.weatherlabs.com/	**The WeatherLab.** This site presents forecasts for more than 2,000 cities as well as predictions, satellite images, Doppler radar imagery, ski reports, aviation weather, and more. An excellent set of tutorials on the weather make great background notes for the classroom teacher.	5	5	all
http://www.whitehouse.gov/WH/Welcome.html	**Welcome to the White House.** This is a very clean, clinical look at the people and the happenings at the nation's capital. It offers a good virtual tour and history section, news of the day and week, and even job openings for those keen to leave teaching!	5	4	K12
http://www.economist.com/menu/homecontents.html	***The Economist.*** This erudite newspaper is available online and makes for excellent teacher background as well as a good source of material for senior students. Many of the topics make great introductions to the study of economics, providing real world examples of the principles discussed.	5	5	9–12
http://govinfo.kerr.orst.edu/index.html	**Government Information Sharing Project.** The government collects huge amounts of information on almost every sector of the community. Much of it is never made available to schools or their communities. This site presents some of this information through a series of databases. There is well-presented information on such areas as population, housing, age, employment, and schooling as well as state-by-state data on economic conditions, exports, and earnings by occupation.	5	5+	all
http://www.earthweek.com/	**Earthweek: A Diary of the Planet.** What natural events happened this week around the world? Check out the locations of hurricanes, earthquakes, volcanoes, droughts, fires, meteors, storms, insect plagues, and any other natural disaster. Updated every week, this is great material to assist students' understanding that Earth is a dynamic system and, despite local appearances, is going through major changes every day. Start at Earthweek's original page for the Classroom Companion section, then head to Earth Alert (http://www.discovery.com/news/earthalert/earthalert.html), the new site of the event updates.	5	4	all
http://k12science.stevens-tech.edu/curriculum/weather/c3whome.html	**Where in the World is Cynthia San Francisco?** Not Carmen's older sister but a twist on the idea. Dr. San Francisco is a nuclear physicist (of course) who has been kidnapped. Students get clues through images, weather data, and satellite photos to help track her down. The main theme here is weather, and along the way students get experiments and activities dealing with the basic concepts of weather. A fun, two-week mini adventure.	4	4	4–12
http://www.dismal.com/economy/releases/new_home.asp	**The Dismal Scientist: Economics.** Despite the highly inappropriate title, this is an excellent collection of statistics having to do with the economy of the United States. The data are well laid out, and this is an excellent site for students to find information to support particular social policies or to demonstrate particular trends. The statistics are also useful to enable students to predict future trends. Statistics deal with savings rates, CPI, housing, industry, economic indicators, light truck sales, the importance of Asia, and much, much more.	4	5+	9–12

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AltaVista (general)	http://www.altavista.com/	**Yahooligans** (K–12 only)	http://www.yahooligans.com/
Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

URL	Comments	presentation	content	grade level
http://www.DisasterRelief.org/	**Disaster Relief.** Numerous disasters occur around the world each day, and often they go unreported in the national press. Often they happen in third world countries where it takes hundreds if not thousands of dead to catch the attention of the first world press. This site provides a balanced approach to reporting disasters all over the world whether they be flood, fire, volcano, earthquake, storm, or nuclear disaster.	5	5	all
http://www.ccph.com/	**Let's Go!: Around the World.** Lots of cultural information here based on the armchair tourist concept developed by *Reader's Digest*. This site focuses on the rain forests of South America and the African continent. There is some good teacher support information here also. If you have a large screen, this would make a good introduction to the topic of conservation and the social issues involved with logging native forests.	5	4	all
http://www.nationalgeographic.com/features/97/geobee/begin.html	**The GeoBee Challenge.** This is a great service from the National Geographic Society. Each day they post five geography questions dealing with a huge variety of issues, places, and people. There are even prizes available.	5	4	4–8
http://library.advanced.org/10326/main.html	**Invest Smart.** This stock market simulation is a very good example of the power of compounding interest and has some very good lessons on investment that all of us wish we had read 20 years ago. The story of the three teenagers who started an investment program is one all teenagers should read (with suitable disclaimers).	4	5	4–12
http://vif27.icair.iac.org.nz/	**An Amazon Adventure.** A very good overview of this region with information provided on flora and fauna, rivers, rain forest, and local peoples as well as maps and interactive material. Many students probably know more about the Amazon than their own town, but this is a very good site.	5	5	all
http://www.pbs.org/wgbh/nova/avalanche/	**Avalanche!** This excellent support site for the television program of the same name is good enough to stand on its own. Excellent background information deals with what causes avalanches and what characteristics of weather and terrain lead to their deadly triggering. Good statistics and advice for all high-country hikers/backpackers.	5	4	4–12
http://www.lib.utexas.edu/Libs/PCL/Map_collection/Map_collection.html.html	**Maps of the World.** The Perry-Castaneda Library map collection holds more than 230,000 maps, covering every area of the world. A lot of these are online at this site. This has to be a cartographer's heaven. There are political maps, sociologic maps (religion, ethnicity, age, etc.), economic indicator maps, geophysical maps, and much more. There is also a great selection of historic maps.	5+	5+	all
http://www.nationalgeographic.com/west/index.html	**Lewis & Clark.** The United States was opened up through the exploits of these two adventurers, and this site profiles their presidentially inspired (Jefferson) journey across the American northwest in search of the Northwest Passage. Great material here from the National Geographic Society.	5+	5	4–8
http://www.un.org/Pubs/CyberSchoolBus/infonation/e_i_map.htm	**INFONATION.** Would you care to compare and contrast the growth rates, geography, economies, population trends, or social indicators of any two, three, or four countries anywhere in the world? With this site you can, and what's more the data are as up to date as possible. Check out such areas as endangered species, forest area, export industries, infant mortality, literacy, car ownership, and many more aspects. Great site.	5	5+	all

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

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http://tqd.advanced.org/2760/	**Anatomy of Murder: A Trip Through The U.S. Legal System.** This excellent insight into the legal system represents what happens in most Western legal systems. Progress through a murder trial, and find out the outcome. It makes a great serial to play out in the classroom over a few weeks. Each day a group of students checks the site and informs the class of the progress from the point of view of the defendant and the victim's family. The glossary is essential.	4	5+	9–12
http://www.andes.org/	**Cultures of the Andes.** Music, pictures, language, and literature from the various cultures that inhabit the Andes regions of South America. This is a great collection of data and images from this exciting region of the world.	5	5	all
http://fox.nstn.ca/~tmonk/castle/casttour.html	**Castles on the Web.** There is nothing like a castle to inspire the imaginings of children. This site provides the opportunity to explore the region of the castle's origin, its history, and the dress and culture of its inhabitants. It also make a great starter for writing, art, and science. This site provides images of castles throughout Europe.	5	4	K–8
http://www.bucknell.edu/departments/russian/chrono.html	**A Chronology of Russian History.** With the dissolution of the Soviet Union, the history of this vast network of independent states is coming to the forefront of both national and international inquiry. This site provides an excellent introduction to the development of modern Russia, dating back to A.D. 860. Divided into four arbitrary time periods, this chronology is well set up and makes fascinating reading.	5	5+	all
http://britannia.com/history/h6f.html	**Monarchs.** This excellent overview of the monarchs of Britain starts with the Kings of Kent and follows the various "houses" through Windsor. Good background information varies in depth.	5	5	all
http://www.mungopark.com/199712/contents.asp?issues=199712	**The Magi.** What a great site and what a theme for looking at this unique part of the world. Follow the Magi as they head for Bethlehem from their starting point in Tehran. Follow all the Magi (not just three) and learn of the times, the geography, and the history through this virtual flashback. You can even listen to a broadcast from Manger Square.	5+	5	all
http://odur.let.rug.nl/~usa/	**A Hypertext on American History.** This excellent site covers the colonial period to modern times. So much information is here that it would not do the site justice to attempt to list it. It is a combination of several very well-respected journals and books.	5	5+	K–12
http://ecedweb.unomaha.edu/Dem_Sup/demand.htm	**Explorations in Economic Demand.** The title belies an excellent site dealing with the interplay between supply and demand. The excellent context deals with setting the price of jeans. The site makes a very good self-paced learning module. Several modules are here, all with discussion questions.	4	5	9–12
http://www.palestine-net.com/	**Welcome to Palestine.** In cyber space, the state of Palestine can be a reality. This is a good document for getting some background into the situation in the Middle East. There are materials here on all aspects of life, culture, education, and, of course, politics.	4	5	4–12
http://www.sirs.com/tree/social.htm	**Social Issues.** This is a links page, but it is very directed and many of the links are very useful. Topics include Aging, AIDS, Alcohol, Consumerism, Death & Dying, Drugs, Ethics, Family, Habitat, Mental Health, Pollution, Population, Privacy, and much more. One of the few useful lists. Material suitable for a wide variety of ages but mostly for teacher background.	4	5	4–12

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http://www.worldgame.org/index.html	**The World Game Institute.** This site contains a huge amount of information as well as the game that is its focus. Anyone from students to the corporate set can play the game, which involves saving planet Earth. Excellent resources are available to support the game such as mapping software, Global Date Manager 3.0, and encyclopedic information. The most fascinating aspect is the "World-ometers," clocks that track changing world data such as the standard population of the earth as well as not-so-standard topics such as the number of people going hungry, oil consumption, HIV-infected individuals, babies born to teenagers, forest loss, topsoil eroded, U.S. dollars spent on weight loss, expenditure on weapons sales and education, amount of solar energy falling on the earth, and much more. The rate at which these meters change as you sit watching is frightening and fascinating to students and teachers alike.	5+	5+	all
http://www.gcdis.usgcrp.gov/	**Global Change Data & Information System.** This huge collection of data and links to information covers a large range of global change issues and statistics. Sections deal with contexts such as libraries and documents, educational resources, agency programs and projects, data sources, and a search tool (essential). You can also make a connection with "Ask Dr. Global Change," a good place for students to send questions and for teachers to tap into as a resource.	4	5+	8–12
http://wwwvms.utexas.edu/~jdana/irehist.html	**Irish History on the Web.** This huge database of local information and links to sites supports research on Irish history. With the Irish "troubles" so much in the news, a study of the history of this country is an excellent topic, and there are bound to be plenty of parents who can help. Sections cover general Irish history, reading suggestions, some excellent time lines, Unionist and Republican histories, sites dealing with the famine, and much more.	5	5+	all
http://www.napolean.org/home_us.html	**Napoleon.** Information here describes the life and times of this famous French military hero (?). In addition to links to collectors of Napoleonic memorabilia, the site has more than 400 articles for research purposes. Best to start at the Museum or Exhibition center.	5+	4	8–12
http://www.accountingstudents.com/	**AccountingStudents: The complete online resource for accounting students.** This site aims mostly at the college sector, but it contains a huge collection of information for teachers of senior accounting as well as students themselves. Information on job opportunities, a toolbox containing interviews with recent graduates and experienced accountants, and advice for the interview.	5	5	10–12
http://www.iei.net/~tryan/deadroma.htm	**Dead Romans!** A rather nondescript title for a site with a lot of life. Among the sections is one on Roman coinage and another on the emporers of the times complete with a time line. Take the 3-D virtual walk-through and tour the Colosseum, Via Sacra, and the Forum Romanum as they stand today.	5	5	8–12
http://library.advanced.org/2840/Begin.html	**The Traveler.** Take on a character and then develop your own storyline to the past. The storyline allows students to get a feel for ancient Greek times. Become the daughter of an Egyptian king and queen, the merchant traveling the Grecian Empire trying to make a living, or the scholar attempting to gain knowledge from the wise men of the time.	5+	5	4–12
http://tqjunior.advanced.org/3643/	**Kid's Consumer Corner.** This great, student-developed site looks at the importance of money and how to make the most of what is earned. Sections include Smart Buying, Smart Saving, and Smart Investing. With simple, good advice, this site works well.	4	4	4–10

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http://www.supersurf.com/	**World Surfari.** This is a great collection of virtual visits to Japan, Italy, Kenya, Jamaica, or Greenland. Each "surfari" considers such aspects as the society, history, people, and geography of the region and is an excellent introduction to these countries. Get a multimedia projector and become a virtual traveler.	5+	5+	all
http://www.pbs.org/weta/faceofrussia/	**The Face of Russia.** Russia, that huge land mass we know so little about, is probably undergoing one of the greatest sociologic and economic experiments in history. This site provides some background and insight to events and the effects on its people. The site is developed by PBS in support of the television program of the same name and is very well researched and presented.	5+	5	8–12
http://fcit.coedu.usf.edu/Holocaust/	**A Teacher's Guide to the Holocaust.** This subject raises many emotions, but here it is treated as history chronicling the people and the times that helped make this one of humankind's darker moments. The site has an excellent time line as well as an excellent section dealing with a more integrated "arts" approach. Teacher guides and student activities accompany the unit.	5	5	8–12
http://hyperion.advanced.org/11046/	**Fourteen Days in October: The Cuban Missile Crisis.** Those who were alive at the time remember the tension and the waiting for each news broadcast to learn what was transpiring during those long days. This site follows the issues as seen by the two main political players Premier Nikita Khrushchev and President John Kennedy. Use tools such as the Briefing Room, Crisis Center, Recon Room, and the Debriefing Room to track the events and the personalities associated with the closest the world has come to nuclear war.	5+	5	4–12
http://www.foe.org/	**Friends of the Earth.** These environmental crusaders emphasize not just environmental issues but social ones also. They have a strong sense of community and value indigenous communities. They present a fascinating economic solution, and the site highlights their work around the world. Lots of material here on global climate change, ozone depletion, and all the major environmental and social issues.	5	5	all
http://www.socsciresearch.com/	**Research Resources for the Social Sciences.** This huge meta-index and resource center is for all those working in the field of social sciences. Every area is here from psychology and political science to economics and geography. This site takes a lot of time to work through, but what you want is here somewhere.	4	5+	all
http://www.wsu.edu:8080/~dee/MESO/MESOPOT.HTM	**Mesopotamia.** Although often considered one culture, the cultures of this region were quite diverse. This excellent unit of work is excellently presented and very comprehensive. The site looks at the main cultures of the region, including the Sumerians, Amorites, Kassites, and Chaldeans. An excellent time line shows the development and subsequent decline of the various civilizations. A glossary, links, and gallery also appear.	5+	5+	8–12
http://www.ciesin.org/IC/wbank/tde-home.html	**Trends in Developing World Economies.** This is a great source of statistics for students to use to show trends and predict possible scenarios for the future. They can predict modifications that would improve some of these economies. This is good contextual material that will liven up all economics classes. This very thorough database looks into all aspects of the economy.	4	5	9–12

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http://www.fordham.edu/halsall/mod/modsbook.html	**Internet Modern History Sourcebook.** This exceptional collection of information covers Western, world, and American modern history. It starts with the reformation and works through the industrial, American, and French revolutions, then proceeds to a good overview of the 19th century and then the world wars. An excellent history image bank, music files, and much more are here. Any teacher of modern history should start here.	5+	5+	8–12
http://qumran.com/anne_frank/	**The Virtual Anne Frank House.** *Mazel Tov* to the largest collection of online material dealing with this famous house where Annalies Frank hid from the persecution of the Jews during the second world war. Her writings portray an era that much of the world tried to shut out. Take a virtual tour of the house and discover the times she lived through and the writings that propelled her into the role of the chronicler of the plight of the Jews and the courage of those who helped hide her and her family.	5	5+	all
http://www.wsu.edu:8080/~dee/EGYPT/CONTENTS.HTM	**Egypt: A Learning Module.** This excellent module could serve as a guide for a grade 3–7 teacher to follow with students or as an independent learning module for students in grades 8–12. The content is exemplary, thorough, and very well laid out. Elements covered include a general history, the three recognized kingdoms, leaders through the times, and the influence of the Romans. Some good material also includes information on hieroglyphics, an excellent time line, an atlas, and a gallery.	5+	5+	3–12
http://www.fordham.edu/halsall/sbook.html	**Internet Medieval Sourcebook.** This site offers a massive collection of information, maps, images, projects, texts, courses, and much more. This database has organized a huge amount of information on all aspects of medieval Europe. In many cases, the articles and sections are fully referenced, often to the original manuscripts.	5	5+	8–12
http://www.jacksonesd.k12.or.us/k12projects/jimperry/rome.html	**History Online: Ancient Rome.** This excellent site looks at all aspects of this civilization. The concept is to keep the topics in contexts students can relate to such as Antique Roman Dishes: "Hey, Ma, What's for dinner? How about an ancient Roman supper?" Other topics follow this approach in areas such as art, architecture, the ruins, a Roman ball, money, entertainment, catapults, and much more.	5	5+	all
http://www.fordham.edu/halsall/ancient/asbook.html	**Internet Ancient History Sourcebook.** This excellent collection of material deals with all aspects of ancient European history. The focus is the Ancient Near East, Egypt, Israel, Persia, Greece, the Hellenistic world, Rome, and the origins and subsequent development of Christianity. There is a huge collection of online texts as well as commentaries, articles, essays, and research material.	5	5+	8–12
http://titanic.eb.com/01_01.html	**Titanic.** The story of the sinking of this symbol of luxury and the separation of the classes is known by almost all, and since the film was released, still more information and mythology has surfaced. This site provides an encyclopedic look at the Titanic, who built her, the times she was built for, and what eventually led to her sinking.	5	4	all
http://ecedweb.unomaha.edu/ecosim.htm	**EcoSim.** In this simulation, each member of the group takes a role in a company or the government legislature. The software is free, and the manual and spreadsheet disk are a few dollars. Well worth doing and students enjoy it.	4	5	4–12

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http://terraserver.microsoft.com/	**TerraServer:** The largest database in the world! This online database is a collection of aerial photographs of sections of the planet's surface. Use the online service (free) to zoom in on an area and get great visuals of locations and geographic features around the world. As the database grows, more and more of Earth's surface will be available. If you've always wanted to visit the Grand Canyon, London, or the Eiffel Tower, now you can. This is an excellent service for all levels. It can help younger students grasp the difference between countries, cities, and towns and understand geographic relationships.	5+	5+	all
http://www.visitholland.com/index.html	**Holland.** The Dutch have a love for their country, and it shows through this site. Take your class on a virtual tour of Holland, and check out the culture, attractions, and happenings or do a thematic tour. Excellent overview.	5	5	all
http://www.mungopark.com/199706/contents.asp?issue=199706	**Vietnam.** Excellent journal of travels through this remarkable country. The journey is divided into themes to make the amount of information manageable. The themes include a series looking at the role of Vietnam in the war in the '60s. The highlight is the gallery, focusing on the changing face of Vietnam as it struggles into the 20th century and then attempts to leap into the 21st. Excellent site with lots of great images is invaluable in the classroom on the subject of the country or the general issue of war and peace.	5+	5+	4–12
http://www.us-history.com/toc.html	**An Abridged History of the United States.** This is an excellent introduction to the history and development of the United States. Download sections and keep a permanent record of this very large but very usable document.	4	5+	8–12
http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/home.rxml	**Online Meteorology Guide.** This site provides an excellent introduction to the more technical aspects of meteorology. It is a collection of individual modules students can work through or teachers can use as a guide to present this subject. Excellently produced and very thorough.	5	5+	4–12
http:///socialstudies.com/activities/Rights.html	**Universal Human Rights and the Global Citizen.** This lesson plan deals with the rights of each individual and, in particular, the Universal Declaration of Human Rights. A collection of reproducible student sheets accompany the site.	4	4	4–12
http://olympics.tufts.edu/	**The Ancient Olympics.** Excellent site investigates the ancient games. What sports were featured in the ancient games? What was the context and the spirit in which the games were played? Did athletes cheat? Tour Olympia where the games were held originally, and read some of the stories from the athletes of the time. Have students write essays as if they were competing.	5	5	K–10
http://www.ncpc.org/mcgruff.htm	**McGruff and Scruff: Fighting Crime.** Excellent site with a student focus. Join McGruff (a bloodhound) who is on the trail of crime. On the way, he shows students what they can do to help reduce its effect on them. A series of fun activities, secret messages, bike safety tips, and a "what if" game are here. Great site if you are studying communities.	5	5	K–8
http://www.mungopark.com/199611/contents.asp?issue=199611	**Timbuktu.** This site has great potential as a cross-curriculum unit looking at what and where Timbuktu may be. A great introduction to this area of Africa, the site's extensive photojournalistic approach provides an excellent set of images to work with as well as a traveler's tale.	5+	5	all

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Technology Education

URL	Comments	presentation	content	grade level
http://www.gene.com/ae/	A top 10 site, **Access Excellence** is an educational program sponsored by Genentech, Inc. Primarily for high school students, the site has activities, an e-mail exchange, biotechnology news, competitions, an explanation of **biotechnology**, and much more. A great site, and every teacher of all levels should start here.	5+	5+	all
http://www.si.edu/ndm/dfl/dflhome.htm	**Design For Daily Life.** The effectiveness of objects that surround us in our daily lives depends on their design. Even the most basic appliance or tool must be designed well to be effective. This site looks at these designs and covers everything from shoes to spoons to clothes. Excellent site to introduce the concept of design.	5	5	all
http://www.sd68.nanaimo.bc.ca/schools/coal/at/at.htm	**Mr. G's Applied Technology Site.** This extensive collection of projects is a great start to developing your own. A project outline/portfolio approach is used with all the masters provided free for teacher or student use. A good range of technology units/lessons is presented, and they are well laid out and easy to use by both teachers and students.	4	5+	all
http://www.forbes.com/tool/	***Forbes:* Digital Tool.** This monthly Ezine deals with issues of management, finance, media, technology, computers, and general interest areas. Generally interesting, though a right-of-center publication.	5	4	9–12
http://www.edgeonline.com/	**Entrepreneurial *Edge* Online.** As students develop products, systems, and environments, they need to communicate their work to the market. This site has a lot of excellent material to assist students in understanding how to build a business and communicate effectively. Check out the sections on business builders, market analysis, financial management, customer service, and sales for some excellent advice and articles.	4	5+	4–12
http://outcast.gene.com/ae/AE/AEPC/WWC/1992/	**Bioethics.** The developments in the field of genetic engineering have created conundrum after conundrum as new vistas are opened up and debated. Technology students need to be aware of the process of logical, deductive, and critical thinking. This site presents case studies, issues in ethics education, and courses in ethics.	4	5+	all
http://www.theplumber.com/H_index.html	**The History of Plumbing.** This site may sound tedious, but, in fact, it is a fascinating history. Students often have little understanding of the inconveniences their forebears faced before the toilet moved inside the house, before hot running water was available to the masses, before washing was considered useful and hygienic, and before the water they consumed was clean. They are even further amazed that all these events are very recent, and their great-grandparents can remember a time before all of the above were available.	4	5	all
http://jefferson.village.virginia.edu/~meg3c/id/id_home.html	**Invention & Design.** This is an excellent site dedicated to the invention and design process. The site has a variety of modules for students to work through. The emphasis is a hands-on approach, and the module topics range from playing the role of a venture capitalist who needs to analyze the data provided to decide whether to fund the venture to a look at the invention and development of the telephone. Excellent site with a unique approach. Designed for grades 6–10, but the ideas are suitable for all ages.	4	5+	4–12

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http://www.moomilk.com/home.htm	**MooMilk.** This great site for junior technology has milk as a theme. From the welcoming mooing cow, this site provides good information on the production and distribution of milk as well as issues surrounding the economics of producing milk. If you are city-bound, not a problem; take the virtual tour of the dairy farm (no gum boots required).	5+	5	K–8
http://www.indiana.edu/~ancmed/intro.HTM	**The Asclepion: Ancient Medicine.** The technology behind medicine has been critical for our survival as a species. This site provides an excellent background into how it started and what thinking went on in ancient cultures and premodern and early modern civilizations. Excellent site with high interest material.	4	5	all
http://education.leeds.ac.uk/~edu/technology/aegoetze.htm	**School of Education, University of Leeds: Technology Education.** This site does not rate highly for presentation, but the content is great. It introduces teachers to aspects of business and technology such as company structure, methods of production, design specification, environmental issues, health and safety, and testing and quality. Great information for all teachers and senior students.	3	5+	all
http://www.boff1.demon.co.uk/	**The Technology Resource Center: Northern Ireland.** A great site with a lot of well-directed information. Worth looking at are the reference center, the general Design Information section, and the links. They ask you to register your name on their database, which is a good idea to link technology educators around the world.	5+	5	all
http://www.igs.net/~mascott/	**Scotty's Surfin' Shack.** One of the best sites for technology education has had an upgrade. Check out the essays presented here. They are very well written and have considerable depth. There is also a good selection of sites to visit. A must for all technology educators.	5+	5+	all
http://www.techedlab.com/main.html	**The Technology Education Lab.** Along with Scotty's Surfin' Shack, this has to be one of the best technology education sites on the web. Steve Mikulski has done a great job. One of the most useful segments is his interpretation of technology, the links to technology resources, and the link to Montgomery County Public Schools Technology Education Department pages. Very well-presented schemes.	5+	5	all
http://www.ipenz.org.nz/	**The Institution of Professional Engineers New Zealand.** This is a rich source of information, in particular, *IPENZ,* the New Zealand Engineering Magazine online. This magazine is an excellent source of information and background for all teachers of technology. A top 10 site.	5+	5+	all
http://www.needs.org/develop/	**Synthesis Case Study Library.** This site links to some very useful places, including to a set of **case studies in design** and production of the Mattel Color Spin toy, Boeing 777, IBM Proprinter, Saturn car, and a solar vehicle. All these sites are well worth a visit.	5+	5+	all
http://www.fao.org/waicent/faoinfo/sustdev/welcome_.htm	**Sustainable Development: Dimensions.** Peoples' needs for land, water, food, and income are the root cause of environmental degradation. Our future depends, therefore, on finding a lasting balance between the demands of human development and natural resource conservation. These are the dimensions of sustainable development. This top 10 site looks at the issues involved in all the technology areas and how to expand our wealth through a balanced approach that takes into account real needs and opportunities.	5+	5+	all

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AltaVista (general)	http://www.altavista.com/	**Yahooligans** (K–12 only)	http://www.yahooligans.com/
Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

URL	Comments	presentation	content	grade level
http://www.plasticbag.com/	**The Plastic Bag Companies** have gone to town here to convince the world that plastic bags are environmentally friendly. This site looks in some detail at the plastic vs. paper issue, which is similar to the polystyrene vs. paper cup arguments. The choice is not straightforward, and this excellent site provides a great core around which to develop a unit of study at any level. A great site.	5	5+	all
http://cct.seas.ucla.edu/cct.home.html	**The Center for Clean Technology.** This very large site deals with all sorts of technologies that are endeavoring to clean up their act. Transport and pollution topics dominate, but there is some excellent information here on a variety of issues. The issues of technology and society are well covered.	5	5+	all
http://www.cit.state.vt.us/educ/vtea/index.htm	Vermont has an excellent **Technology Education Association.** This is its home page, and it is full of good information. The group has a strategic plan, they are concerned with standards and learning opportunities, and they even have a lending library (postage extra). An Association that is going somewhere! A great definition starts the site: "Technology is human innovation in action. It involves the generation of knowledge and processes to develop systems that solve problems and extend human capabilities."	5	5+	all
http://alberti.mit.edu/publications/designedmit.html	**Designed at MIT.** This excellent page provides a feel for the design process as taught at one of the most prestigious schools in the world. This is a very thorough look at the design process through 10 stages, including teamwork, brainstorming, and studio design prototyping. Good examples are given at each stage.	5	5+	all
http://www.energy.ca.gov/education/index.html	**Energy Quest.** This excellent site looks at the issue of energy, including recycling, from an educative stance. The site provides background on the societal and environmental effects of technological developments.	5	5+	all
http://www.io.tudelft.nl/research/IDEATE/index.html	**ID8. The Industrial Design Research page.** This great industrial design site has some excellent design projects that deal with concepts as well as material projects. Included are such topics as the Importance of Visual Imagery, History of Form-concepts in Domestic Appliances, and much more. Sounds very dull, but it is anything but.	5	5+	9–12
http://adage.com/news_and_features/special_reports/tv/	**History of TV Advertising** from the '40s to the '90s. This is an excellent site for students to explore and see the changes in how advertising has been used as a sales tool. It includes some hilarious reminders of what we took so very seriously not all that long ago. This site can be used to predict what the trends will be in the 2000s. Good demonstration of the changing trends in society and the changing approaches advertising has used.	5	5+	4–12
http://www.ncrel.org/sdrs/edtalk/toc.htm	**Plugging In: Choosing and using Educational Technology.** From the Council for Educational Development & Research, this site hosts several very good articles for teachers. Download the Acrobat version of "Plugging In," and read about where education and technology are heading. Very helpful advice for all IT and technology teachers.	4	5+	all
http://adage.com/news_and_features/special_reports/commercials/	**The Top 50 Commercials of All Time.** Why were these commercials so successful at the time? What social issues and stereotypes were in play that allowed so many people to identify with the ideas or concepts presented? These questions and much more can be drawn from this site.	5	5	all

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

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http://www.aba.asn.au/leaflets.html	**Information about Biotechnology.** One of a series of newsletters from the Australian Biotechnology Association, this site explains biotechnology. It is very useful to any teacher introducing biotechnology. Follow the link to articles on DNA fingerprinting and genetic engineering among others.	4	5+	all
http://www.edc.org/CCT/ccthome/	**Children & Technology.** This is the home page for the Center for Children and Technology. Some great research is posted here as well as some experimental pages. Teachers using the computer and the Internet need to read some of this research and realize the strengths and weaknesses of the computer in different situations.	4	5+	all
http://www.kku.ac.th/~supnga/food/index.htm	**Food Science and Technology Resources.** The food technology area is well served by this site. It is a list site but includes a huge range of food science institutes from around the world, resources, businesses, and much more. This is a good list site.	4	5+	all
http://www.cit.state.vt.us/educ/vtea/problem.htm	**The Problem-Solving Cycle.** This is a must-see site for all technology teachers. Download it and read it. The paper uses an excellent example to demonstrate the process, and it is entertaining reading. Students will find this process critical for success.	4	5+	all
http://www.gene.com:80/ae/TSN/SS/	**Science Seminars** are monthly seminars on biotechnology topics researched and presented by Genentech. They are very comprehensive, and a new one is on display each month. The site includes the seminar, student activities, a seminar discussion panel, and a suggestion box. This is really good interactive technology.	5+	5	4–12
http://www.dupont.com/	This is the **home page for DuPont.** This company has been the source of numerous technological innovations, and many of the latest are outlined here in considerable detail. To keep up with the materials section of the curriculum, you must visit this site. Technical reports are available here as well.	5	5	all
http://www.thetech.org/exhibits_events/online/help.html	The Hypertech. **The Tech Museum of Innovation.** This excellent site looks into the innovation process and the people who have developed innovative solutions. An excellent interactive exhibit covers robotics and is the next best thing to having it in the classroom.	5	5	all
http://www.syllabus.com/	***SyllabusWeb.*** From the same people who publish the magazine, this great site provides the latest information in using technology in the classroom. The magazine is good, too, and teachers should consider sending for it. The well-written site has some excellent reviews, ideas, and plans. A good place to start looking when developing your IT plan for the next five years! Although aimed primarily at the college level, the same concepts apply.	5	5	all
http://www.fas.org/spp/51L.html	This is the home page on the **Challenger Space Shuttle Disaster.** It has some excellent essays with great backup research and photos. Technology and society is well served here through such titles as "NASA dilemma: Shuttle Efficiency vs. Safety" and many others. This is a large and very useful site.	5	5	all
http://edweb.sdsu.edu/edfirst/bigsix/bigsix.html	**Big Six: A Systematic Approach to Information Problem-solving.** This is essential reading for all teachers involved in using information access tools, which I hope is all of you! Mike Eisenberg and Bob Berkowitz have a set of six essential skills that define an overall process all students and teachers need to be aware of. This is essential reading and makes for a great introduction to the whole area of information management and interpretation.	5	5+	all

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http://www.ce.cmu.edu/GreenDesign/	**Green Design Initiative.** There has been a trend in recent years to develop environmentally friendly solutions to problems as the world starts to realize some of the consequences of the excesses of the last 50 years. Carnegie-Mellon University has been at the forefront of environmentally aware design and development. This site reflects that work through some good examples as well as a look at the relationship among the stakeholders in this type of development.	5	5	all
http://www.tcnj.edu/~ties/	***ties* (the magazine of Design and Technology Education)** is probably the premiere technology education magazine and well worth getting for its research and curriculum ideas. This magazine is very useful to teachers of technology as it draws on worldwide experience all can learn from.	5	5	all
http://www.globalideasbank.org	**The Global Ideas Bank.** This site calls for ideas to be submitted and also presents all the ideas presented so far. The ideas have been categorized into groups such as housing innovations and, under such titles as Crime & the Law, social innovations. This is a good site for students and teachers to see that ideas do not necessarily have to produce products; they can be the root of social change through new systems or environments.	5	5	all
http://scholar.lib.vt.edu/ejournals/JTE/jte.html	***Journal of Technology Education.*** Some great research background for teachers is here. Understanding the concepts behind what teachers teach is important, and this material is to the point and useful. A search button helps you find what you want. An excellent site.	5	5	all
http://nctn.hq.nasa.gov/	**NASA Commercial Technology Network.** This site reviews the commercial success of technologies developed by NASA and includes the latest spin-off book, which also describes technologies NASA believes could have new applications.	5	5+	all
http://www.edu.leeds.ac.uk/~edu/technology/pages/desspec.htm	**Design Specification.** This is an excellent introduction to setting and meeting design specifications. It's short but ideal for when the brief is refined and specifications are added.	4	4	all
http://www.research.att.com/	**The AT&T Labs** are synonymous with technological development. Their home page is good but could have more content considering the amount of research they do. The site has a good contact base; they accept e-mail requests, and they will mail large amounts of information to educators on specific topics.	4	5	4–12
http://www2.ncsu.edu/unity/lockers/class/ted430/intro.htm	**TechnoSchool.** Brilliant! An introduction to manufacturing, this site is designed for students and teachers. An excellent introductory unit of work is followed by a complete unit of work on manufacturing system design, which is ideal for older students and perfect as background information for teachers at all levels. The Java-based Analyze and Decide section takes students through the steps of brainstorming, decision making, and labor cost and break-even analysis. This is great material suitable for all levels.	5+	5	all
http://www.netspace.net.au/~saccroy/6hats.htm	**Edward de Bono's Six Thinking Hats.** From the man who invented the term *lateral thinking*, this concept of six hats empowers users to understand the process of critical thinking. These pages provide an insight into how to encourage thinking, including the lateral type.	5	5	all

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http://planet.rtec.org/menu.html	**Planet Innovation.** This site looks at innovation in the use of technology in the classroom. Some great planning tools are here to assist in the decision-making process, including a cost estimator and a great ideas base as well as a message board where you can post your questions or help someone else out. You can also check who has visited for contacts in your region. Worthwhile logging in for the information that is here. The software library and the technology plan database are also key areas to visit.	4	5+	all
http://www.santacruz.k12.ca.us/~jpost/projects/TS/TS.html	**Taking Stock.** This integrated curriculum looks at a range of skills, but all of them are part of the technology curriculum. This is an excellent simulation of the Wall Street market. The six activities for students are well constructed and laid out. This is a great resource.	5	5	9–12
http://repo-nt.tcc.virginia.edu/classes/tcc315/index.html	**Invention & Design Resource Page.** This is a trial distribution center for active learning modules used in the TCC 315 Invention and Design course at the University of Virginia. Two modules look at The Invention of the Telephone and Inventing for the Environment. This is an excellent resource for all levels, although for primary students it will be predominantly a teacher background resource.	5	5	7–12
http://www.cat.org.uk/welcome.html	**The Centre for Alternative Technology** is based at Machynlleth, Wales. Their bimonthly magazine is really an excellent resource for teaching technology. The Centre is mostly concerned with alternative energy, in particular tidal and wind energy. The home page is good with plenty of information and good links.	5	5	4–12
http://tommy.jsc.nasa.gov/	**Automation, Robotics and Simulation Division.** This great site from NASA is full of references for teachers wishing to improve their skills and older students. It has good information on systems as well as robotics, and a good area looks at simulations and graphics development.	5	5	4–12
http://www.kie.berkeley.edu/KIE/curriculum/curriculum.html	**The KIE (Knowledge, Integration, Environment) program** is excellent for introducing problem solving based on needs and opportunities. A series of lesson plans use the Internet and **problem-solving strategies** to debate, critique, and design projects. Most of the examples are science-based, so this site fits in either of these two curricula. Particularly enjoyable is the Aliens on Tour section where students are asked to design clothing and dwellings for cold-blooded aliens with different needs. Great stuff.	5	5	all
http://www.core77.com/	This is the **CORE Industrial Design Network.** A well-presented set of pages that covers everything from employment (very interesting!) and product reviews to what schools are teaching. The contraption section is neat with reviews of new contraptions for the person who has everything.	5	5	4–12
http://www.lbl.gov/Education/ELSI/ELSI.html	**Ethical, Legal and Social Issues (ELSI) in Science.** This site presents a series of articles collected by the Lawrence Berkeley National Laboratory's ELSI Project on the issues of technology and society. Investigate genetic patents, air pollution, and medical privacy among other issues.	5	4	8–12
http://soundprint.org/~nstw/activities/activities.html	**Explore Through Science & Technology.** Here are a range of activities that span the science/technology spectrum. Some great ideas, and the activities range through the elementary and junior high years. Well worth a look.	5	4	K–8

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http://www.techreview.com/articles/aug95/atomic.html	**The Atomic Age at 50.** This is an excellent site to review a particular technology that had a great effect on the world. Its impact is recorded by 21 experts from Japanese survivors to military personnel. An excellent site.	5	5	4–12
http://www.docfizzix.com/	This is the standard **mouse trap challenge** of using a mouse trap to power a vehicle as far as possible. Records are kept from schools around the world that have entered the challenge. You can enter and receive a certificate if you make the top 10. A good site for providing an international aspect, and it could be used for introducing e-mail and other Internet tools.	5	5	K–8
http://solstice.crest.org/	**Solstice: The Center for Renewable Energy and Sustainable Technology.** This self-explanatory site looks at the variety of alternative energy sources and issues surrounding these technologies broken down in three areas: Energy Efficiency, Renewable Energy, and Sustainable Living. A very thorough site.	4	5	all
http://www.web-link.com/dba/dba.htm	This is the home page of the **Disabled Businesspersons Association.** The site has a lot of support information for the disabled, but it also very useful for the able! Well worth a look for some good business advice.	4	5	all
http://www.globalethics.org/default.html	**The Institute for Global Ethics.** "Because we will not survive the 21st century with the 20th century's ethics." Whether you agree with the introduction, ethics will be a major issue in the technology curriculum, and this site will be very useful. There are four aspects to the Institute's mission: articulating and discovering ethics; analyzing world trends in ethics; disseminating information on ethics; and evaluating public awareness of ethics.	4	5	all
http://www.invent.org/book/index.html	**National Inventors Hall of Fame.** This is a great collection of the great inventors by name or the date they were elected into the hall of fame. An index of inventions is very useful to look at lateral thinking and how different objects became household names.	4	5	all
http://opens.org/start-up/	**Start-Up Education: Entrepreneurship.** This site describes the work of a nonprofit organization that encourages teachers to participate in study programs that promote the value of entrepreneurship. The first three chapters of the teacher's manual are online (well worth purchasing the remaining parts) as is a very informative newsletter, and the e-mail list is great for picking up ideas for the classroom. This program is run throughout the United States, Canada, and the United Kingdom. Good ideas site.	4	5	6–12
http://www.accessone.com/~sbcn/index.htm	**The Solar Cooking Archive.** This site has some great articles on the design, use, and advantages of solar cooking. There is a lot of information here, and it is well presented and at an appropriate level for all ages to use.	4	5	all
http://www.kie.berkeley.edu/KIE/curriculum/summaryHITD.html	**The "Houses in the Desert" Project.** One of the popular contexts in technology education is the home but, traditionally, homes we experience everyday. Usually these do not have to meet specifications required by extreme weather conditions. This site is dedicated to those who choose to live and construct homes in the arid regions of the earth. The issues of heat flow, insulation, and radiant energy shine through. Excellent 10-day unit of work.	4	5	4–12
http://www.si.edu/lemelson/Wmvent.htm	**Women Inventors.** This excellent essay on the role of American women inventors shows that women, although not officially recognized as the holder of the patent, often were the authors. Good material to encourage women inventors.	4	5	4–12

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http://www.technology index.com/education/	This research list is from the **Technology Education Center in the U.K.** Follow the link to their home page and discover the support the Ministry of Education has put here! An excellent site well worth visiting. Send e-mail for publication lists and more.	4	5	all
http://english-www.hss. cmu.edu/cyber/	**Technology and culture.** This excellent site looks at the links between technology and culture. Check out sites on Art and Technology, Community, Technology & Society, Ads and Telephones, and much more. Excellent reference site.	4	5	all
http://quest.arc.nasa.gov/ women/hpage.html	So why is **Women of NASA** in the technology section? One of the objectives of the curriculum is to try and break down the stereotypical images of engineers and technologists, and these women do it very well. The site's main areas are profiles of women in NASA, a Women of the World resource, and live chats with the women of NASA. A good reference site.	4	5	all
http://www.cato.com/ biotech/	WWW Virtual Library: **Biotechnology.** A list of links to other biotechnology sites. This is a good set although very general.	4	5	all
http://www.minedu.govt. nz/Curriculum/technology/ statement/index.htm	You can find the entire New Zealand **Technology Curriculum** at this site. This is quite useful for cutting and pasting using the examples as set out in the second half of the text.	4	5	all
http://sln.fi.edu/tfi/units/ energy/windguide.html	**Investigating Wind Energy.** Wind is an alternative power source students can investigate in some detail. Students can make simple windmills and use wind power to generate electricity. A lot of simple design work can be integrated into a unit on wind power. Challenge students to come up with strategies for marketing this form of alternative energy. This is an excellent site with good activities and good background.	4	5	all
http://www.trenton.edu/ ~teched/te_resources.html	**Resources for Technology Education.** The College of New Jersey, Trenton, has been running specific degree and masters courses for technology teachers for some years, and this site is full of design briefs, ideas for teachers, links to other sites, and much more.	4	5	all
http://fbox.vt.edu:10021/ cals/cses/chagedor/biosites .html	**List of Useful Biotechnology Home Pages and Websites.** Just that: a list of sites. It has a summary of each site.	4	5	all
http://www.columbia.edu/ imaging/html/marc/empire /empire-marc.html	This site looks into the **construction of the Empire State Building.** It is very well put together, using photographs from the time. Great resource for looking at technological structures.	4	5	all
http://www.ImagineNation .com/Island.htm	**ImagineNation: Islands of Innovation.** Take a visit to these islands of innovation. Check out specifications issues on Pavilion Island, examine patents and potential profits on Treasure Island, download a range of free software to use in the invention and innovation process at Camelot Island, and do a range of tutorials on Xanadu Island. Several other islands have offerings available. A good site to work through with students.	5	5+	all
http://members.xoom.com /mrmuff/main.htm	**Henry Ford.** No study of technology education would be complete without mention of this man and the impact he had on the production process. Good background material traces his life and goals.	4	4	4–12

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http://fas.sfu.ca/css/update/	***Update:* Centre for Systems Science.** This magazine investigates systems behind the technology process. There is some excellent material here for teachers in the immediate sense and senior students in years to come. A good site to help teachers add to their current skills.	4	5	9–12
http://foundation.novartis.com/	**The socio-political impact of biotechnology in developing countries.** This site from the Novartis Foundation for Sustainable Development offers an excellent introduction to this topic. It looks at issues such as food security in developing countries, the role of recombinant genetics and biotechnology, and the conditions necessary for new biotechnologies to be socially acceptable. Great material for junior high and high school technology studies.	4	5	8–12
http://scriptorium.lib.duke.edu/hartman/	**This is the Hartman Center for Sales, Advertising, and Marketing History.** This site reflects the special collections Duke University Library has collated in this area. This very large site is well put together with a quick search engine and is very useful for looking into changing trends in the area of sales and marketing.	4	5	9–12
http://www.srl.gatech.edu/	**The Systems Realization Laboratory.** The what?! You know, systems realization. This is the study of how engineering systems are designed, developed, deployed, maintained, and retired in an economic and ecologically sound way. This is actually a very good site for teachers and older students looking into technology systems.	4	5	9–12
http://www.glitter.com/	**The Fashion Page.** This is technology in a broad sense, but aesthetics combined with new materials is very much fashion. This is one of the less glamorous fashion sites but more worthwhile. A good general site for debating issues.	4	5	4–12
http://thayer.dartmouth.edu/teps/	**Thayer School of Engineering at Dartmouth.** This engineering school has been looking at teaching engineering concepts. Their great home page contains lots of useful material about the workshops they run for teachers as well as some good research reports. One of these, the Problem Solving Cycle, is well presented and all teachers of technology should check it out.	4	5	9–12
http://www.biofuels.nrel.gov/	**Biofuels Information Center.** Operated by the National Renewable Energy Laboratory at the U.S. Dept. of Energy, this site has a great collection of information dealing with alternative fuels and their future promise. Sign on for the newsletter, search the database, or check out the projects under investigation.	4	5	9–12
http://zebu.uoregon.edu/energy.html	**Energy and the Environment.** This is a very diverse collection of sites and papers on everything from fusion energy to photovoltaic cell costs to world power technologies. Teachers need to look through these sites before directing students here.	4	5	4–12
http://www.oneworld.org/itdg/index.html	**Intermediate Technology.** The term was coined by E. F. Shumacher when present technologies in third world countries were unable to meet the needs of the people, but at the same time imported technologies were inappropriate. The result was the search for intermediate technologies to breach this gap. This excellent site examines the consequences of the inappropriateness of some technologies and the search for intermediate forms.	4	5+	all
http://whyfiles.news.wisc.edu/014forensic/index.html	**Forensic Science on Trial.** What are the technological processes used when police gather evidence that must stand up in a court of law? This site develops a theme and you carry out the investigation. Excellent site looks into recent and traditional technologies for tracking down the criminals.	5	4	all

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http://www.eren.doe.gov/consumerinfo/	**Consumer Energy Information.** This very comprehensive site looks at everything from landscaping for energy efficiency to energy tips for small businesses. Many discussions on energy efficient technologies in relation to technology and the environment are here as per the technology and society part of the curriculum. It also has some primary school resources.	4	5	4–12
http://www.cuug.ab.ca:8001/~branderr/risk_essay/titanic.html	**The Titanic Disaster:** An enduring example of money management vs. risk management. This great essay examines the difference between the two concepts. This would be very useful background for all technology teachers and useful as an example for more senior students. This is a good follow-up to seeing the movie.	4	5	4–12
http://www.nttc.edu/assist/inventions/inv2inn.html	This is the online version of the book ***From Invention to Innovation.*** Save this excellent resource to the hard drive and read it at leisure. The book looks at innovation and at making new products, processes, and environments happen. Good reading (no pictures mind you).	3	5	4–12
http://www.cybf.ca/	**Canadian Youth Business Foundation.** This site is excellent for up-and-coming entrepreneurs. It provides four main channels: Entrepreneurs X Change, which includes small business success stories as well as success tips and chat opportunities; E Connections, which allows students to advertise their products, systems, or environments; Insights, which provides expert assistance; and the Resource Station where students can get support and idea help.	5+	5+	all
http://www.hersheys.com/chocworld/main.html	**Visit Hershey's Food Corporation and the largest chocolate factory in the world.** The virtual tour of the factory takes the cybersurfer on an exploration of the chocolate-making process from raw materials to finished product. This site also has information on the history and production of chocolate.	5	4	all
http://oberon.educ.sfu.ca/	**Exemplary Center for Interactive Technologies in Education.** If you are into multimedia productions, 3-D work, or creation of online material in general, you will find plenty of interest here. Good site.	5	4	all
http://web.mit.edu/invent/	**The Invention Dimension.** Great site! As it is from MIT, it is biased toward American inventions, but each week a new inventor is presented with details of his or her quests and discoveries.	5	4	all
http://www.teched.coe.ohio-state.edu	**Ohio State Technology Education.** A great home page with definitions, essays, links, and background to degree programs.	5	4	all
http://www.wsc.org.au/	**The home page for the World Solar Challenge.** This solar challenge has solar cars from around the world competing in a race through Australia's Center—more than 4,000 km! There is some excellent material here, and this race is a good one to watch each year as it gets a lot of publicity and is a good example of an emerging technology that students can replicate in the classroom on a smaller scale. How about a race from the local post office to the school?	5	4	all
http://shot.press.jhu.edu/associations/shot/	**The Society for the History of Technology.** Founded in 1958, this society records the relationship between technology and societies and cultures. This is a major aspect of technology education, and this site provides some support in this area as well as a good selection of links to other sites that support this aspect of the curriculum.	4	4	all

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

URL	Comments	presentation	content	grade level
http://www.odyssey.org/	**Odyssey of the Mind.** This site is dedicated to the team approach to **problem solving.** The Odyssey of the Mind program, which spans the globe, looks at divergent thinking and problem solving through a series of challenging and motivating activities.	5	4	all
http://www.ncsa.uiuc.edu:80/edu/RSE/RSEyellow/gnb.html	**A Web-based Interactive Stock Market Learning Project for K–12.** This is the "Good News Bears" stock market project. This simulation uses real-time stock market data from the New York Stock Exchange. The objectives of the exercise are well laid out, and all the teacher and student material has been prepared for you. This is an excellent introduction to the stock market but should probably be preceded by a course in ethics!	5	4	all
http://www.uiah.fi/varde/varde.html	**VARDE on the Web.** This comprehensive site from the University of Art and Design at Helsinki looks into design with the themes Ecology, Quality of Life, and Resources. Of 55 projects, seven are displayed here for students and teachers to look at.	5	4	9–12
http://www.asqc.org:80/	**The American Society for Quality.** Quality will be a real issue for all students, and teachers need some background in what quality management is all about. This page is a good resource to find background information as well as to keep up with quality news.	5	4	9–12
http://alcom.kent.edu/ALCOM/ALCOM.html	This is a great site from ALCOM all about **liquid crystal displays.** These are the materials that make up laptop computer screens and temperature displays in fish tanks. There are activities, information, and some good ideas for projects.	5	4	9–12
http://bizednet.bris.ac.uk:8080/	**Business Education on the Internet.** The University of Bristol has set up this innovative program to link students studying technology with businesses. It is well designed and has good content. You can join the mailing list and get regular updates as well as "visit" a business. Good background information.	5	4	9–12
http://www.uspto.gov/	**The U.S. Patent office.** This is a great site to find out whether what your students have invented is really new or just to realize how few of the patents applied for actually become real objects. You can search records or see what's new. Well worth a look especially if you are working with students on the area of patenting.	5	4	4–12
http://www.lbl.gov/MicroWorlds/Kevlar/KevlarIntro.html	**What is Kevlar, why is it so strong, and what can it be used for?** This excellent page introduces students to this unique material. If you do not use Kevlar or other nontraditional fibers, try contacting a local sailmaker.	5	4	4–12
http://www.mkt-place.com/market/4tomorrow/4menu.html	**4Tomorrow.** This site presents a range of new inventions available for manufacturing. It is good for teachers and students to see what new products are around and what design or development factors make them "new."	4	4	8–12
http://www.thetech.org/exhibits_events/online/genome/overview.html	**DNA: Life's Instruction Manual.** Much recent technological advancement is in the field of genetic research and the quest to produce superior life forms. This site presents excellent background to this revolution. Zoom into DNA and see what it is and how it works. Great motivational and highly instructional material.	5+	5	all

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

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http://www.css.msu.edu/Windows95/Windows95.html	**George & Mike's Guide to Windows 95.** Help sites for Windows 95 are highly depressing as amateurs can't usually understand the introduction let alone the commands. But, at last, here is a site designed for those who know very little computer-speak. Excellent advice on all aspects of this Microsoft behemoth. Check out such extras as Microsoft Exchange, ScanDisk, emergency recovery, and more.	4	5+	all
http://www.ncrel.org/tandl/homepg.htm	**Learning Through Technology: A Planning and Implementation Guide.** All schools should download and read this essential collection of excellent advice before heading off into computerland and cyberspace. Very practical, easy-to-read material.	4	5+	all
http://www.whps.act.edu.au/WHISP/whisp.html	**WHISP: Wanniassa Hills Information Skills Project.** Start here for a great introduction to how to access and manipulate information so students can carry out research-based exercises without the exercises becoming giant cut-and-paste exercises. The focus of this site is on grades 3–10. The teachers at Wanniassa Hills school have developed an online program that encourages students to develop information management skills.	4	5+	3–10
http://www.med.upenn.edu/~bioethic/	**Bioethics.** Outside of the United States and some European countries, ethics courses are not taught. But technology education demands an ethics component. There is some excellent information here on the issues of cloning and genetics.	4	4	4–12
http://www.toymuseum.com	**Museum of Advertising Icons.** This is an excellent page for looking at the issue of visual language in communicating to potential clients. The ideas here are immortal; they all worked for different reasons when one takes into account the culture of the day. Have students try and identify which icons might still work if introduced now and why. Fascinating site.	5	4	all
http://www.fabriclink.com/	**Fabriclink.** This is the best collection of information on fabrics around. This encyclopedic collection of information and applications is great for those teachers who are working with fabrics and their applications to needs and opportunities. Check out the What's New section to see the latest fabrics and what they are used for. The Consumer Guide and the Fabric University both contain excellent material. Put an hour aside just to get a glimpse of this site.	5	5+	all
http://www.eet.com/	**The Electronic Engineering Times.** *EE Times Online* is an excellent newspaper for the more senior students and their teachers. To keep up with what is happening in electronics, this is the place to visit. A great site for students to review and then present an article or make a presentation to the class on a particular technology, whether it be a process, product, or environment.	5	5	9–12
http://www.5tigers.org/ta2text/a1.htm	**Zoo Tiger Adventure.** The tiger in captivity—a real technological problem looking for a solution from you. Working in teams, be guided through the process and collect background information. Use the tiger handbook for research, and make sure your tiger enclosure meets that design brief, otherwise the public could be on the menu!	5	5+	all
http://fulton.seas.virginia.edu/~shj2n/design/1design3.html	**Solving Problems: Methods and Tips.** This is an excellent short article on the problem-solving system FASCORR. It is simple and easy to remember and would be an ideal start for students in meeting identified needs and opportunities. Brief and to the point.	4	4	all

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Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

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http://www.eduweb.com/amazon.html	**Amazon Interactive.** The focus here is the Quichua people who live in this part of the world. A great people study, it looks at setting up an ecotourism project. Great technology with a completely different people group looking at a need and an opportunity and using a process to decide on its viability.	5+	5	all
http://www.worldbank.org/html/fpd/technet/	**1998 World Development Report on Knowledge for Development.** This far-reaching site discusses some key issues related to technology and society. Although intended only as a background, the material is very provocative and asks some critical questions. Other than the inference that information is knowledge, it is excellent.	4	5	9–12
http://www.wed.asiansources.com/	***Chief Executive Asia.*** "The Global gateway to management knowledge, education and career opportunities." This site lives up to this quite unreal statement by providing numerous articles on everything from management techniques related to quality, entrepreneurship, and communication; trends and strategies in leadership and organizational structures; and managing technology with regard to trends, techniques, and organizational issues. A great deal is here, but it is very well organized and easy to find. Articles are suitable mostly for grades 8–12, but the site has good background material for teachers of all levels.	4	5+	8–12
http://www.baddesigns.com/	**Bad Human Factors Designs.** This is an excellent scrapbook full of hopelessly designed pieces of equipment that must have been intended for extraterrestrials. Great and highly entertaining material, but each entry makes a valid point. Ergonomics and following through the design process have not been part of the development program for these products. Check out the can opener, the paper towel dispenser, the staplers, and much more.	5	5	all
http://www.asee.org/precollege/	**Engineering: Your Future.** This site has been developed for students looking at possible careers in engineering and technological engineering. Excellent material discusses the various engineering fields, has interviews with practicing engineers, describes what engineers actually do, lists famous engineers, and more. Excellent site for senior high students.	5	5	9–12
http://www.pixelfoundry.com//KPT.html	**The Pixel Foundry.** This is a great site for all those trying to construct their own web pages who want more options than the standard HTML editor may offer. There are tutorials on making graphics for the web, lots of tricks and tips, and an excellent section looking at techniques for using Photoshop. If you need inspiration, check out the gallery. There are also some great backgrounds you can pick up along with forums to help you when you run into problems.	5	5	all
http://cdr.stanford.edu/	**Center for Design Research.** Numerous design projects here can be followed through from concept to final product. High tech material is here for the boffins in the classroom—teachers and students. The highlight here is the DesignJournal concept for assessment, which contains some good ideas teachers could borrow.	5	4	4–12
http://interact.uoregon.edu/MediaLit/HomePage	**Media Literacy On-Line Project.** Without an understanding of the power of the media, the technology process goes nowhere. This great site examines all aspects of media literacy, including accessing information through technology. A very thorough site that provides teachers and students with great background material in this area.	4	5+	all

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http://www.whitehouse.gov/WH/EOP/OSTP/NSTC/PCAST/k-12ed.html	**President's Committee of Advisors on Science & Technology: Panel on Educational Technology.** This very impressive panel evaluates the pedagogy, the economics, and the leading edge of IT and TCT. The paper the committee has produced is well informed and investigates the complete picture and makes some very sane and rational suggestions. Print the whole paper. It's a good background paper to hand out to the senior management and the school board.	3	5+	all
http://www.pmi.org/publictn/pmboktoc.htm	**The Project Management Institute's Body of Knowledge.** Two essential precursor courses for technology education teachers are Time Management and Project Management. The Project Management Institute has now made available free of charge their handbook on this topic. Well set up with very relevant content; the key chapters are 1, 2, 6, and 11. For senior teachers, all chapters will be of great use. Essential site.	5	5+	all
http://www.ivanhoe.com/	**Medical Breakthroughs Reported by . . . almost everybody!** This great site allows one to keep up with the frenetic development taking place in the medical world. Very interesting material. Students can keep up with innovations and developments in the biomedical and biomedical engineering fields without the technical jargon.	4	5	all
http://www.catalog.com/impulse/invent.htm	**The Internet Invention Store.** If you think innovation and ingenuity are dead, come here to find a huge range of new products. They are fascinating in name and intriguing in nature. Try out the Campocatcher or the Shiftcush. This is a great site to get students thinking about identifying needs and opportunities.	4	5	all
http://mustang.coled.umn.edu/inventing/drewinvent.html	**Richard Drew: The Inventor.** The young employee of the Minnesota Mining & Manufacturing Company (later known as 3M) is an excellent example of the approach, skills, and determination required to take a good idea and bring it to life. Get students to read this excellent profile of an inventor, and have them analyze the personal and professional qualities that led to the development of many new products.	4	5	4–10
http://www.girltech.com/index.html	**GirlTech.** There is a lot of information here for both the student and the teacher. Great support and encouragement for girls to pursue a course of study in technology education in a format that has appeal. The teacher section is fascinating with its good articles on the different ways girls and boys play and interact with each other. There are some good recommendations for classroom practice and much, much more. Check out the invention page with its kooky inventions and some excellent female inventor role models.	5	5+	all
http://mustang.coled.umn.edu/inventing/Inventing.html	**Learn what it takes to be an Inventor** at the **3M Collaborative Invention Unit.** Students must play the roles of four characters if they wish to become innovators in their time. Good material for all levels, but great introductory material for grades 2–8, which is hard to find in this area.	5	5	all
http://www.biorap.org/br7contents.html	**Product Safety, What are Your Safety Chances?** Excellent approach to this topic from BioRAP. The site offers a student section, teacher's guide, and plenty of references and materials to keep the more gifted child going. Check out the research done in this area, toxicologist career information, an extensive word list, information on product testing, and some quizzes. Excellent site.	4	5+	all

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http://space.bsdi.com/	**International High School Space Settlement Design Competition.** That's right, now everyone can be a rocket scientist in a competition that changes every year. The 1999 competition takes place in the simulated future, the year 2044. You have to design the fourth Foundation Society settlement called Darwinat, which will house 11,500 people. Darwinat must have the capability to convert to an "Ark Ship," transferring its inhabitants to another solar system. Good exercise even if you do not submit your proposal. Excellent background material available.	4	5	4–12
http://www.osa.ie/osa/	**O'Sullivan Associates.** This Dublin, Ireland, design company sets out, very well, the process it takes its clients through when they come in with a problem that needs a solution. As technology students need to work in an environment as authentic as possible, this site provides good insight into the workplace these students may finally end up in.	5	5	7–12
http://daedalus.edc.rmit.edu.au/default.html	**Center for Design at RMIT (Royal Melbourne Institute of Technology).** This site highlights a design department that focuses on environmental initiatives and blends the design aspect with the effect on the environment and society. Lots of information and examples.	5	4	4–12
http://www.tcdc.com/dmgmts/dmgmt1.htm	**Project Management.** "Project management is the discipline . . . of defining and managing the vision, tasks, and resources required to complete a project." Excellent set of links provides a range of free resources that together constitute a great basis of instruction in the field of project management. Huge amount of worthwhile information located here.	4	5+	all
http://www.stolaf.edu/network/iecc/related-lists/TECHNOLOGY-EDU	**Technology-Edu.** You can sign up to this technology education mailing list and keep informed on the developments in technology education. The process is a two-way one, and you are expected to contribute appropriately where you have particular skills and/or knowledge that can assist other teachers.	4	4	all
http://www.exploratorium.edu/cycling/index.html	**The Science** (read Technology) **of Cycling.** The humble pushbike has come a long way since the Penny Farthing days, and recent Olympic events have shown the advantage new technologies can bring to the sports people who race for their country. This excellent site describes each section of the bike and investigates the innovations in both design and materials used. Excellent material that is very well presented.	5+	5+	4–12
http://www.frogdesign.com/	**Frog Design ISD.** The principles of Integrated Strategic Design and Communication are well set up here for potential customers and also teachers and students. A lot of very worthwhile material here on the design process from a business perspective.	4	5	all
http://www.si.edu/lemelson/Quartz/contents/	**The Quartz Watch: Symbol of Technology in a Changing World.** This great web site describes the influence of the quartz watch on the watch-making community. Learn who invented it, the history of trying to sell the idea to the Swiss, and about its sale to Japan and the crunch that followed. The Watch Wars section is essential for all technology teachers to read and use in the classroom.	5	5+	all

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http://teleeducation.nb.ca/it/module3/	**Telecommunication Networks.** This excellent introduction to telecommunication systems has both theory and practical assignments dealing with both digital and analog components of this system. Excellent contexts used in a far-from-boring presentation.	5	5	all
http://iti.acns.nwu.edu/clear/bridge/index.html	**Clearinghouse for Infrastructure: Bridge Information.** What would a technology program be without some bridge building? This site has all the background you could possibly want. There is every manner of information here from bridge paint removal to bridge foundations, corrosion, fatigue, disasters, and much, much more.	4	5+	all
http://www.mainfunction.com/issues/fall97/index.html	**MainFunction.com** This Microsoft offering is full of useful information for teachers and students. This is not just MS propaganda but a mixture of news of emerging technologies, trends, and technical developments. Well worth a look.	4	5	all
http://www.gene.com/ae/21st/TE/	**Classrooms of the 21st Century: Technology in Education.** There are four sections here, all of which are worthy of mention. Probeware deals with the use of sensors in the classroom. These probes can measure almost any variable, including pressure, temperature, BOD levels, force, acceleration, and many more. The second topic deals with Bioethics in the classroom. The third is a discussion group looking at technology in the classroom, and the fourth topic is All About Online Projects.	4	5	4–12
http://www.nsf.gov/od/lpa/nstw/start.htm	***National Science & Technology Week.*** This excellent site for any school in any country provides news and teaching activities that profile science and technology. There are also a range of activities, kids-only sections, and a section on innovation.	4	5	all
http://www.ttalk.com/	**TechTalk.** All the news from around the world, dealing with the latest advances in the latest technologies—Web TV to Java to satellite delivery of the web. A great *Readers Digest* approach allows busy teachers to keep up with what is happening out there in techno land.	4	5	all
http://www.io.tudelft.nl/education/io96/Crea-CPSinfo.html	**Creativity & Creative Problem Solving.** This is a listserv covering a good set of letters and requests as well as ideas for teaching this essential element of the technology curriculum.	3	5	all
http://www.quantumbooks.com/Creativity.html	**Creativity, Innovation and Problem Solving.** This is a great introduction to creativity, an essential element of the technology process. The quote from Trevor Kletz is very appropriate: "Why are we so much better at answering questions than at answering the right questions? Is it because we are trained at school and university to answer questions that others have already asked? If so, should we be trained to ask questions?" A very good site that deals with techniques for increasing the ability of students to be innovative and ingenuous. Some excellent examples here are great classroom motivators.	4	5	all
http://www.si.edu/organiza/museums/nmah/lemel/guitars/	**The Electric Guitar.** Struggling to find a theme to keep your students interested in technology education? At this site, they can investigate the invention and development of the electric guitar, follow its commercial success and innovative designs, and learn how guitars actually work. Excellent site with innovation as the theme.	5	5	4–12

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http://www.scicentral.com/E-mechan.html	**SciCentral Mechanical Engineering & Robotics Resources.** The site offers a list of sites divided into directories, specialized resources, research news, special reports, selected articles, and a search engine. From each of these areas you can select topics in each area to search, or look through the list provided.	4	4	8–12
http://biotech.chem.indiana.edu	**Biotech.** This site is dedicated to increasing the public's understanding of biotechnology. It has a dictionary of terms, an introduction to glycolysis, consumer reports, and an education section. A good introductory site for older students and a good reference site for teachers introducing biotechnology.	4	4	all
http://www.slu.edu/eweb/	**eWeb: Education for Entrepreneurship.** This site supports St. Louis University courses in this field, but two aspects make it stand out as a great site for technology educators. First is a great bookmark file dealing with entrepreneurship, and second is the neat little giveaway dealing with business applications of the Internet.	4	4	4–12
http://www.scicentral.com/E-02engi.html	**SciCentral Engineering Resources.** The site offers a list of sites divided into directories, specialized resources, research news, special reports, selected articles, and a search engine. From each of these areas you can select topics in each area to search, or look through the list provided.	4	4	8–12

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Visual Arts

URL	Comments	presentation	content	grade level
http://sunsite.unc.edu/wm/	**WebMuseum, Paris.** Two hundred thousand people visit this web art museum every week, and it posts out via the phone line more than 10 million documents! It has to be good and it is. Check out the section on Paul Cezanne or any one of more than 40 museums of art and treasures from around the world.	5+	5+	all
http://sgwww.epfl.ch/BERGER/index.html	**World Art Treasures.** This is one of the best sites on the web for both its quality of images and the concept behind its presentation. It is supported by 100,000 slides belonging to the **Jacques-Edouard Berger Foundation.** Rather than present a huge database on the collection, the authors have developed concepts such as following Seti through his pilgrimage to Abydos. The programs are designed to provide a "true experience through the new technology." They succeed.	5+	5+	all
http://wwar.com/default.html	**World Wide Art Resources.** This massive site has links to almost anything you could possibly imagine in the art line. A well-established site, it is a comprehensive registry of visual arts information worldwide, including performance art and antiques. Great site.	5	5+	all
http://www.uky.edu/Artsource/artsourcedir.html	**ArtSource.** This huge site has an excellent collection of referenced sites. Check out fabric, metal, or any other imaginable art medium. Look at art in ancient Greece or into the developing merger between art and architecture. This site also has a complete set of links to art journals and electronic exhibitions.	5	5+	all
http://www.kn.pacbell.com/wired/art/teach.guide.html#links	This is **a teacher's guide to using art resources on the web.** This excellent document explains how to use art resources on the Internet in the classroom. Print the document and have a good read. The document also links to good sites teachers can use to demonstrate the points the document mentions. All art teachers or teachers using the Internet to teach art should start here.	5	5+	all
http://www.msstate.edu/Fineart_Online/home.html	**FAF: Fine Art Forum OnLine.** This great site reviews art sites for the fine art connoisseur. There are some great sites on the web dealing with this style, and this site provides links to them.	5	5	9–12
http://www.art.uiuc.edu/kam/	The famous **Krannert Art Museum** at University of Illinois at Urbana-Champaign is home to more than 8,000 works of art dating back to the 4th century B.C., and this home page is testimony to this collection.	4	5+	all
http://www.christusrex.org/www1/sistine/0-Tour.html	This is **an amazing tour of the Sistine Chapel.** You really need a 23-inch monitor to get the full impact of these photographs and their detail. A excellent virtual trip of a lifetime. The art collection here is stunning with works from Michaelangelo and other masters of the time. The presentation and information here is first class.	5+	5	4–12
http://www.artsednet.getty.edu/	**ArtsEdNet.** A good general art site with great teacher resources and gateways to some great art sites. Very comprehensive list of sites is categorized and easily accessed.	5	5	all
http://members.tripod.com/~artworkinparis/index-5.html	**Art History for Kids.** In this online adventure, students tour a variety of art sites around the world. During the process they are asked to look for particular artists and their styles, art periods, and use of color. Good concept.	4	4	4–12

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http://artsedge.kennedy-center.org/	**ArtsEdge** is an excellent concept designed to link art and education through the Internet. With search tools, a spotlight on particular art sites, the curriculum studio, and much more, this is an excellent general site for teachers or senior students to visit.	5	5	K–8
http://www.vol.it/MIRROR/EN/ftp.leonardo.net/museum/main.html	**A gallery exhibition of the works of Leonardo da Vinci.** The gallery has wings dedicated to da Vinci's oil paintings, his engineering and futuristic designs, his drawings and sketches, and his life and times. It is simple to use and easy to read, and the illustrations are excellent.	5	5	5
http://www.gii.getty.edu/	**The Getty Art History Information Program.** The Getty Trust has brought its philanthropic weight to bear on the web with style. This excellent site is well managed and produced. It deals with art history well and is excellent for all senior art students.	5	5	9–12
http://www.visi.com/~eduweb/pintura	**The Case of Grandpa's Painting.** This is brilliant. Not a painting hanging on a wall but an investigation with A. Pintura art detective. Join him as he tries to solve the case of the missing painting. Through the investigation, students learn all about composition, style, and the great masters. Excellent web material. Best art site in this text.	5+	5+	all
http://www.visi.com/~eduweb/insideart/	**Inside Art.** While on a trip with his class to the art museum, a bored and daydreaming student finds himself captured by a momentary vortex and sucked into the painting he was just looking at. Help find who painted it and why so our prisoner can escape and rejoin his class. Great interactive site with a detective theme investigates color, use of brush strokes, style, and passions. Highly recommended as a learning center.	5+	5+	all
http://www.cartooncorner.com/artspage.html	**Emmett Scott's Arts & Activities.** Drawing cartoons is all about getting the expression right. This site provides step by step instructions on how to draw expressive caricatures. From a renowned cartoonist, this site has authenticity and provides drawing tricks as well as some extra resources on stories and puzzles.	5	4	K–8
http://www.saumag.edu/art/studio/chalkboard.html	**Art Studio Chalkboard.** This resource is for the artist who is getting serious or the art teacher who provides, or wishes to provide, formal instruction. Great information on teaching perspective, shading, color theory, and use of different materials and techniques. There is a lot of material here.	4	5	4–12
http://www.ugrad.cs.jhu.edu/%7Ebaker/monet.html	This site is a tribute to **Claude Monet** and is a very worthwhile effort. In addition to information on his paintings, the site has facts about his life and links to museums that house collections of his work. You can even purchase a tie to demonstrate your love for his work! Great site but lots of information, so be patient.	5	4	9–12
http://mistral.culture.fr/files/imaginary_exhibition.html	**The age of enlightenment in the paintings of France's national museums.** This huge site emphasizes French painting through the period of enlightenment. There is an excellent family tree of artists and important personages of the period, which is very useful for an overview of the tremendous confluence of ideas through this period. Artists are indexed, and a good selection of paintings are available to view.	5	4	9–12
http://pasture.ecn.purdue.edu/~agenhtml/agenmc/china/china.html	**The Art of China.** The Chinese style of art can be introduced at any grade level. This site provides an excellent source of information and ideas as well as images students can draw on and integrate into their own cultural heritage.	5	5	all

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AltaVista (general)	http://www.altavista.com/	**Yahooligans** (K–12 only)	http://www.yahooligans.com/
Yahoo (themes)	http://www.yahoo.com/	**Ask Jeeves for Kids** (natural language)	http://www.ajkids.com/

URL	Comments	presentation	content	grade level
http://www.magic.ca/magicmedia/hypervision.html	**hyperVision art gallery.** This electronic gallery has an excellent collection of works, particularly photographic material. Students working with the camera as a medium will find this a good site to visit. The Night Sky exhibit is excellent.	5	5	9–12
http://www.memphis.edu/egypt/main.html	**The University of Memphis Institute of Egyptian Art and Archaeology.** This is a good site around which to develop a unit of work. The Egyptian style of art is highly refined and recognizable, and students can develop ideas in tangent to this. Younger students could look at replacing key characters, such as birds or cats, with more local wildlife while keeping the Egyptian style.	5	4	all
http://wuarchive.wustl.edu/edu/arts/metal/AM_res.html	**The ArtMetal Resource to Metalworking.** If you want to expand your range of materials in art to include metal, this site is the place to go. It has great ideas as well as information on types of metals to use, fabrication, forging and casting, finishes, and even some business advice. Great resource site.	4	5+	all
http://www.arts.ufl.edu/art/rt_room/@rtroom_home.html	**The @rt Room.** One of the best sites for @rt teachers. It serves up great ideas for the classroom at every level, and the ideas are practical and will inspire all those who teach art as part of an overall curriculum as well as the specialist. An excellent section encourages people in @rtrageous thinking: Think like an artist and see art everywhere! Excellent material and well presented.	5+	5+	all
http://sunsite.unc.edu/wm/paint/auth/gogh/	**Vincent van Gogh.** The great expressionist painter who painted for only 10 years was prolific and also very good (by all accounts). This site has a great collection of thumbnails of many of his works, which you can click on to get full screen versions. Accompanying each picture is excellent background and interesting biographical material.	5	5	9–12
http://ausarts.anu.edu.au/ITA/AusArts/index.html	**Ausarts: The ANU Institute of the Arts Library Server.** This is a massive collection of information from the Australian National University on all the arts for both teachers and students.	4	5	all
http://www.mca.com.au	**Museum of Contemporary Art.** This excellent site shows the world the state of play within Australian contemporary art. It has some excellent links to other sites as well as a good display of what the museum has to offer. Check out the Plastic Fantastic display in the past exhibitions sections for an enlightened look at "art."	5	4	9–12
http://www.kn.pacbell.com/wired/art/art.html	**Eyes on Art.** This excellent site continues to improve. It has a lot of material for teachers at all levels, including an excellent Visual Glossary, an art quiz for the experts, some contemporary art issues and debate, and a great section on artistic styles.	5	5+	4–12
http://www.interrouse.com/charcoal_page/foyer.htm	**The Charcoal page.** This ancient drawing tool is still one of the basic tools in art today despite all the advances that have taken place. This site is an excellent tribute to the art of using charcoal. Sections deal with tricks and tips, links to other examples and sites, an excellent gallery, and a question and answer section.	4	5	all
http://www.uky.edu/Artsource/vce/VCEhome.html	**Virtual Ceramics Exhibit.** Looking for some world class examples of ceramic art? This site presents an exhibition that is second to none: more than 60 pieces of contemporary ceramic art complete with judges' comments and artist profiles.	5+	5	9–12
http://wuarchive.wustl.edu/edu/arts/metal/ArtMetal.html	**The Art Metal Project.** Using metal as a medium in art is not common in schools, but this page may inspire some to start looking at it. Check out the virtual gallery for some ideas, then go the resources page for designs, materials, finishes, and processes. Finally, check out the innovations that are seeing this craft come into its own. Excellent site.	4	5	9–12

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URL	Comments	presentation	content	grade level
http://www.nga.gov/	**National Gallery of Art: Washington D.C.** This site offers a huge collection of information on paintings, sculpture, and graphics arts from the Middle Ages to the present. The collection contains more than 100,000 objects listed and available through the web. An excellent search engine allows you to enter an artist's name, a style, a period, or a title.	5	5+	all
http://www.biwa.or.jp/~shiho/	**Wood-fired Stoneware from Shigaraki.** Japan is one of the pivotal civilizations that spawned decorative and artistically inspired stoneware, and this site looks at one of the oldest centers of this innovation in Japan. The Anagama-style kilns are still used, and you can look at the history of the work here as well as view contemporary works.	5	4	4–12
http://www.draw3d.com/	**Mark Kistler's Imagination Station: Drawing in 3-D WWW page.** Not many people can claim to teach 40 million people anything, let alone how to draw in 3-D, but this man apparently has done it. As well as the commercial angle, the site has an excellent set of instructions that introduce drawing in 3-D. Half a million people have visited the site so it must be worthwhile!	5	4	all
http://daligallery.com/	**Salvador Dali.** Yes, the official site! This is a premiere site, and even if you are not a fan of Dali, the site is an art form in its own right. Great historical perspective looks at societal influences on a painter and the resulting art forms. The site has pictures of Dali's works as well as some refreshing information on some of his contemporaries and their works.	5	5	4–12
http://www.seeusa.com/refrigerator.html	**The Refrigerator: an art contest for kids.** This is a great concept. Students can send in their artwork, and each month, five pictures get selected and voted on from around the world.	5	5	K–8
http://www.manymedia.com/show-n-tell/	**The Global Show-n-Tell Museum.** At this virtual art museum, students of all ages from all parts of the globe can exhibit their artwork. Each exhibit includes a brief explanation from the artist about the work. Some of the computer-generated graphics by the older students are particularly good.	5	4	all
http://www.art.net/	**Art on the Net.** This is a classical Net gallery with a range of contemporary and traditional art styles. Selected works have short commentaries.	4	5	all
http://www.artswire.org/Artswire/www/awfront.html	**Arts Wire:** The New York Foundation for the Arts resource site. This excellent site has *Arts Wire Current*, the weekly arts-based digest, tours of other sites conducted by resident and visiting curators, and good sets of links. A general art site but worth a regular visit.	5	4	all
http://www.thinker.org/	**Fine Arts Museum of San Francisco.** Thinker is the largest image database in the world, so if you want some samples of art of any kind, this is the place to go. The Imagebase has 70,000 images (50% of the museum's collection, and they plan to put 100% online), and the database is searchable, making what you need easy to find.	5	5	4–12
http://members.tripod.com/~gilinskj/index.html	**Visual Arts Education Canada.** The lack of visual language on this site is a bit of a juxtaposition, but the content is very useful. It covers a lot of local needs, but a lot of generic material is very useful to all art teachers. As well as links, the site has a great section titled rather enticingly, "Everything you (or anyone else) wants to know about HOW to do visual art (Techniques/Nuts and Bolts/Tips)."	3	5	all

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URL	Comments	presentation	content	grade level
http://www.dhc.net/~artgeek/index.html	**Virtual Curriculum: Elementary Art Education.** A great site designed for teachers of grades K-3. Lessons are grouped under topics, time periods, cultures, and more. Each topic has accompanying lessons and a range of web sites to support the kids with visual clues and start points and provide the teacher with concepts to work from.	4	5	K-3
http://www.remotecom.se/users/snmz/tres.htm	**Sebastian Marquez: Painting in Pixels.** You won't believe this is possible until you see it for yourself. Paintings with the look of old masters created by using paint programs on the computer. Using Painter and Paint Shop Pro, Sebastian Marquez has constructed beautiful paintings with 3-D effects, giving them a rich look of oils. Learn how he does it, then give it a go.	5+	5	all
http://www.chihuly.com/	**Dale Chihuly: Dancing on Glass.** The artwork here is stunning. This artist takes glass and breathes a depth of life into it rarely seen. Beautiful large and small pieces combine fire, earth, gravity and human breath to form stunning color combinations and breathtaking effects. Great inspiration to art students from this well-made site.	5+	5	all
http://www.speculations.com/art4kids/projects.htm	**Cool Art projects for Kids.** This plain text site has some great ideas for a junior art program. Try out Bubble Art, Painting with Snails, Marble and Golf Ball Art, Tissue Paper Watercolors, and much more.	3	5	K-8
http://www.bham.wednet.edu/arts.htm	**Explorers of the Arts.** Artists in the areas of dance, music, painting, and poetry all feature in this list. A lot of notables are missing, but this site provides good compare and contrast material. The investigation from the explorer's perspective offers a lot of ideas. How were these artists explorers? Where did they go that no one had ever been before? What did they find? Answers to these questions unearth some of the genius of each of these artists.	4	4	all
http://www.artswire.org/Community/afmadams/afm/fresco.html	**In Memory of Stephen Dimitroff, Fresco master.** What is great about this site is the excellent set of lessons on how to produce a fresco. This could be done in a modified form at almost every level of the school using the advice and support offered by this site.	5	5	all
http://van-gogh.org/	**Vincent van Gogh: A Handshake in Thought.** Through the life and letters of van Gogh, this site provides excellent background on this renowned painter. His life as recorded by the letters he and others wrote reveals a temperamental artist driven by passion. A fascinating and disturbing picture as well as good gallery material.	5	5	9–12
http://www-personal.umich.edu/~amidkiff/mother/	**The Mother of all Art History Link Pages.** Relatively few pages of links are included in this text or the teachers@work directory, but here is an exception as it is so extensive, and there appears to be some quality control. Every aspect of art history is investigated. The links are broken into 11 major categories.	4	5	9–12
http://www.geocities.com/SoHo/7212/	**Accents.** This excellent site deals with wearable arts and includes the exploration and techniques of wearable art, fiber design, and jewelry. Take the virtual tour of the site and then settle into the areas that interest you the most. Lots of great ideas for the classroom as well as obscure resources such as a dictionary of knitting and crochet stitches.	5	5	all
http://www.asianart.com/	***Asian Arts.*** What a great way to introduce this huge range of styles. Excellent articles in this online journal deal with the development of the various art styles, periods, and techniques as well as current thinking and debates. The site also has links to galleries and exhibitions that feature the various styles. The galleries section presents an excellent range of styles for use in the classroom.	5	5	all

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URL	Comments	presentation	content	grade level
http://www.primenet.com/~arted/	**The Art Teacher Connection.** The theme here is to encourage art teachers to be innovative in the classroom through the introduction of new technologies. With much of the graphic art business now done with computers, art departments realize they must move in this direction to ensure their students can compete in the marketplace. Plenty of ideas and links to other technologies that affect the art world are here.	4	4	all
http://artsedge.kennedy-center.org/cs.html	**Curriculum Studio.** This site has a suite of resources for all teachers of art that includes curriculum standards, frameworks, and guides for curriculum design. It also has subject area resources covering all the arts and discussion sites for teachers of the arts. Have a look through the showcase; although whole programs may not attract you, elements of all of these have merit and provide a great stimulus for ideas and improvements for your own curricula.	4	5+	all
http://www.crayola.com/art_education	**Crayola Art Education.** A great commitment from this renowned innovative company—not much blatant advertising and some good classroom material. Check out the art techniques section as well as the contests. The new products this company keeps coming up with really are fun and allow and encourage innovation.	5	4	all
http://wbanimation.warnerbros.com/cmp/ani_04if.htm	**Animation 101: Courtesy of Warner Brothers.** Very classy site with an excellent introduction to the art of animation. Writing plots, storyboarding, and layout skills are all presented in a lighthearted manner by Bugs Bunny and friends, but this does not take away from the excellent teaching material.	5+	5	all
http://www.whyy.org/aie/	**Learning through Architecture: An Interactive Learning Center for using Architecture in the Classroom.** This site offers sample curriculum materials, good links and reading suggestions, and an excellent section that investigates both the science and culture that has helped mold the styles of architecture over the millennia. A developing, although already exciting, site.	5	4	all
http://www.lava.net/~color.com/	**Color Matters.** Color and color combinations are important in so many aspects of our lives. This site investigates how culture and tradition affect our choices of color, the physiology and psychology of color, and the technology of color. Check out the global color survey and much more. This is a great site for some anecdotal material for the teacher to insert every now and then.	4	5+	all
http://www.naa.org/edge	**The Digital Edge.** Art comes in numerous forms and is a constantly evolving entity. This site looks at art via the electronic media and the numerous possibilities this technology provides. Well presented for the "electronic art" teacher, it has reviews and reports dealing with new developments and styles.	5	4	9–12
http://www.quadrant.net/compumedia/bar.htm	**The Compumedia Home Page.** Computer-based music for the classroom. Check out the latest innovations for the classroom as well as where the author thinks all the technology is heading. Some interesting speeches are included as well as related sites and some examples of what is happening in some classrooms.	5	4	all
http://www.yea.gnet.pl/neteye/start.html	***Net Eye:* An Ezine for Young Computer Artists.** This online magazine and club is targeted at students from 6 to 26 years of age and introduces new ideas, technical information, and the work of some students. Make sure students check out the competition as it can be a great motivator.	5	5	all

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URL	Comments	presentation	content	age group
http://artsedge.kennedy-center.org/student/japan.html	**Japanese Arts Resources.** The art of Japan is quite unique and its stylized form is an excellent vehicle to demonstrate not just technical aspects of art but the impact of cultural influences. This site reviews links to many sites that highlight visual arts, performance arts, and traditional crafts as well as the interplay between culture and art.	5	5	8–12
http://www.italink.com/eng/egui/hogui.htm	**The Florence Art Guide.** For students who appreciate art and art history and for art teachers, this site is a real blessing. Cruise on a virtual gondola around this wonderful city and explore various monuments, historic periods, artists, and artworks that make this city so famous. Click on the map and explore the passion of art.	5	5+	8–12
http://www.kinderart.com/	**Kinderart.** This ever-evolving and ever-expanding web site has had a major upgrade, and its presentation is now exemplary. It contains a great collection of art news, resources, and support for teachers of K–3 art. The more than 225 lesson plans cover every aspect of art imaginable, including multicultural art, sculpture, and printmaking. The art library contains art puzzles and quizzes, articles of interest, art trivia, and links to additional sites.	5+	5+	K–3
http://exchange.coa.edu/HFJourney/polcom/colort.html	**Basic Color Theory.** Many teachers are asked to teach art with very little background in the theory of color. This site presents an easy-to-read and succinct introduction to color theory. It deals with topics in a logical sequence and is also useful as a refresher for students working at high school level.	4	5	all
http://www.mega.it/cities/ecities.htm	**Cities of Art.** Many cities around the world conjure up notions of romance and art, and this site provides a gateway to sites that explore cities famous for their art. This is a unique context to introduce senior students to art—through an atlas. Cities highlighted are Alexandria, Sofia, St. Petersburg, Prague, Basel, Florence, and many more.	4	5+	8–12
http://www.arts.ufl.edu/art/rt_room/@rtifacts.html	**@rtifacts.** This site uses games to teach art history, in particular about the lives of famous artists and what made them create what they did. Excellent approach.	5	4	4–12
http://users.hsonline.net/kidatart/	**The Imagination Factory.** Great site that takes on an environmental awareness approach to art in the classroom. The focus is on the use of recycled materials as an art medium. The site offers plenty of ideas in terms of materials and themes artists can use.	5	4	K–9
http://www.zonezero.com/	***ZoneZero:* Digital photography.** This is becoming a mainstream activity now that many schools have scanners and digital cameras. This online magazine investigates tools and processes that are leading the field into the 21st century. Some excellent galleries of work appear along with an online newsletter you can receive.	5	4	4–12
http://www.paris.org/Musees/Louvre	**The Louvre.** A great introductory site to the Louvre. Check out the museum's history as well as the main exhibitions and great works housed here. Take a virtual tour of some of the museum, and book a ticket for your next visit.	5	5	all
http://library.advanced.org/13681/data/davin2.shtml	**Why is the Mona Lisa Smiling: Learning About Leonardo.** This site demonstrates the great democratic principles of the web: It does not matter who you are, it is the quality of the work that is important. A team effort of Swedish and American students, this site is excellent. It introduces some fundamental, though not simple, concepts behind the success of great paintings. Links to other Leonardo da Vinci sites go with the good original work on the site.	5	5	4–12

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Glossary of Internet Terms

Applet/Java applet: A small application or utility sent with the web page when a site is accessed. The utility may provide animation, a calculator, or a small interactive computer program.

Attachment: A computer file attached to an e-mail message. The attachment may be a text document, a spreadsheet or data document, a photo, or any other file. The recipient must have the same software as that used to create the file to read it.

Bookmark: A list of web sites the user wants easy access to. The browser stores the bookmarks, and to access a site, the user simply selects the site from the bookmark list when online.

Cache/Disk cache: A portion of the computer memory that stores information temporarily so in a repeat request for the information, most of the data is already in the computer, speeding up access to a web site, for example.

CGI scripts: Common gateway interfaces. Web sites use CGI scripts to process forms and data much like a spreadsheet or a database does.

Cookie: A file some web sites use to collate information about visitors to that site. It also allows some elements of a web site to download more quickly by recognizing a user's ID or password.

Domain name: The section of the URL that is the root name for additional pages. For example, disney.com is the domain name for the many URLs that host information about the Disney Corporation.

Download: To establish a connection between two computers that allows the transfer of data between the two machines. This data may be in HTML or FTP formats.

EFL: English as a foreign language.

Emoticons: Symbols computer users place in text to indicate varying emotions such as :-) :-(:-| ;-) P-) .

E-pals: The electronic version of pen pals. People exchange information with each other through e-mail.

Ezine: An electronic online magazine.

FAQ(s): Frequently Asked Question(s).

Flame: Criticism of people who break netiquette rules of the web, usually by spamming (sending unsolicited e-mail messages).

FTP: File Transfer Protocol. When a computer program or plug-in is sent or requested, the format used to send it is the file transfer protocol.

GIF: A picture file format that all browsers can view.

Home page: The main contents page of a web site that often leads to other areas/pages of the site.

HTML: Hyper Text Markup Language. This is the language used to place images and text in specific locations on a web page. Web browsers can read these instructions.

Internet: A global network of millions of computers that communicate with each other. Computers on the network can send and receive information almost instantly.

IRC: Internet Relay Chat. Free software that allows participants to engage in real-time e-mail conversations.

ISP: Internet Service Provider. A business that allows you, once you pay a fee, to use its computers to manipulate and transfer data from or to any computer on the Internet.

IT: Information technology.

Java/Java applets: Java is a virus-free programming language that allows you to download small computer programs (applets). The language is very compact, ensuring that the applets do not take very long to download.

Javascript: A less complicated and less powerful version of Java.

JPEG: A picture format that has better compression than the older GIF format.

Link/Hyperlink/Hypertext link: A link—a means of accessing another web site from a web site—contains a small piece of HTML code "hiding" within it, so when you click on the link, it sends you to a new web page.

Listserv: A group or organization that sends messages to a central person who reviews it and, if the messages are suitable, posts the messages to each of the listserv subscribers through e-mail.

Meta-tag: A piece of HTML code that describes the web site through the use of key words and terms. The tag is added to the very beginning of the site and invisible to viewers. Search engines look for these tags.

MIDI: Musical Instrument Digital Interface. MIDI is a file format for sending recorded sounds over the Internet. Other formats are wave and .au files, but MIDI files are very common for keyboard and synthesized music, which are digital in origin.

MOO: MUD, Object-Oriented. MOOs are Internet-accessible, text-mediated virtual environments well suited for distance learning. Users assume a character and enter into a discussion. Education MOOS are very popular. See http://www.itp.berkeley.edu/~thorne/MOO.html for a list of educational MOOS.

MUD: Multi-User Domains. More general than the object-oriented MOOs, multi-user domains are often game-oriented.

Netiquette: A collection of informal rules that apply to behavior in news groups and MOOs.

Netizen: A cyberspace citizen.

Newbie: A beginner on the Internet.

News group: A group or organization that sends messages to a central computer, which posts the messages onto the news group. Access to the news group is through a news group reader, which is part of your web browser. Some news groups are open and free to access; others require a subscription. Discussions follow threads (topics) until the discussion dies out from lack of interest.

Offline: Not connected to your ISP.

OHP: Overhead projector.

OHT: Overhead transparency.

PDF: Portable Document Format. This file format allows you to download information and retain its formatting. The most common form of PDF is Adobe Acrobat Reader, a free plug-in available from the Adobe web site.

Plug-ins: Plug-ins make web pages more interactive and allow them to produce multimedia effects. Plug-ins often need to be downloaded from a web site on the Internet. Most are free and take between three and ten minutes to download to your hard drive. You need to download a particular plug-in only once.

Proxy (server): A computer that speeds up delivery of web pages by storing frequently accessed sites.

RealAudio: A plug-in that allows transmission of voice/music through the Internet.

Search Engine: A web-based tool that allows you to search for particular topics or themes. The search engine searches the Internet for web pages that contain information relevant to your search.

Shareware/Freeware: Software you can access and use by paying a nominal fee or in some cases no fee at all. If no fee is involved, the software is sometimes referred to as freeware.

Spam/Spamming: Unsolicited e-mail sent through news groups and bulk e-mail.

URL: Uniform Resource Locator. This is the alpha-numeric address of a web site that, in essence, is a phone number you dial to access that site (e.g., http://www.teachers-work.com/).

Utility: A small software program that enhances computer operation such as a bookmark organizer or screen saver.

Virus: A piece of computer code carried by an attachment or software that destroys computer files. Sometimes a virus has a minimal effect (a smiley face may appear on your start-up screen), and in some cases it destroys the hard drive.

Vivo: A plug-in that allows transmission of voice/music through the Internet.

World Wide Web (WWW): A subset of the Internet made up of graphic and text elements often referred to as web sites.

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Mark Treadwell

Mark is an educational consultant advising teachers in New Technology curriculums. Mark has conducted numerous technology-based workshops and conferences for educators in New Zealand and has published a number of works on the subject of technology for educators. His recent publications include *Innovation & Ingenuity: Interpreting the Technology Curriculum in New Zealand*, *Searching the Web*, and *Introduction to Astrophysics*.

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ISBN 1-57517-142-2
90000
9 781575 171425